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OF

LONDON.

VOL. IX.

FOR THE YEAR 1867.

WITH A LIST OF OFFICERS, FELLOWS, ETC.

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Kealy, John R., M.D.	Portsmouth.
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Aveling, James H., M.D.	Sheffield.
Fowler, James, Esq.	Wakefield.
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Elected

1865 Bailey, Henry Woodruffe, F.R.C.S., Thetford, Norfolk.

1863 Beatty, Thomas Edward, M.D., M.R.I.A., &c., late Professor of Midwifery at the Royal College of Surgeons of Ireland, President of the King's and Queen's College of Physicians of Ireland; 78, Merrion square north, Dublin.

1862 Churchill, Fleetwood, M.D., Professor of Midwifery, King's and Queen's College of Physicians, Ireland; 15, Stephen's green north, Dublin.

1862 McClintock, Alfred H., M.D., late Master of the Lying-in Hospital; 21, Merrion square north, Dublin.

1862 Duncan, James Matthews, M.D., A.M., Lecturer on Midwifery and Diseases of Women and Children, Surgeon's Hall; 30, Charlotte square, Edinburgh.

1862 Hall, Archibald, M.D., Professor of Midwifery, University of McGill College, Montreal, Canada.

1863 Pagan, John, M.D., Professor of Midwifery at the University, Glasgow; 83, West Regent street, Glasgow.

1862 Simpson, Sir James Y., Bart., M.D., D.C.L., Professor of Midwifery, University of Edinburgh, Physician-Accoucheur to the Queen in Scotland; 52, Queen street, Edinburgh.

FOREIGN SUBJECTS.

Elected

1863 Braun, Carl, M.D., Professor of Midwifery, Vienna.

1862 Channing, Walter, M.D., late Professor of Midwifery in the University of Cambridge, Boston, U.S.

1863 Depaul, Jean Anne Henri, M.D., Paris.

1862 Dubois, Baron Paul, late Professor of Clinical Midwifery in the Faculty of Medicine, Paris.

1863 Faye, F. C., Professor of Midwifery in the University of Christiania.

1864 Hecker, C., Munich.

1866 Hugenberger, Theodor, M.D., St. Petersburg.

1866 Lazarewitch, J., Kharkoff, Russia.

1866 Lazzati, Pietro, Milan.

1863 Martin, Eduard, M.D., Director of the Institute for Clinical Midwifery at the University, Berlin.

1862 Meigs, Charles D., M.D., late Professor of Obstetrics, &c., in the Jefferson Medical College, Philadelphia, U.S.

1864 Pajot, Ch., M.D., Professor at the Faculty of Medicine, Paris.

1866 Rizzoli, Francesco, Bologna.

1862 Scanzoni, F. W. von, M.D., Professor of Midwifery, Würzburg.

1864 Sims, J. Marion, M.D., late Surgeon to the Women's Hospital, New York.

1866 Thomas, Abraham Everard Simon, Leyden.

1862 Virchow, Rudolf, M.D., Professor of Pathological Anatomy in the University of Berlin.

ORDINARY FELLOWS.

Those marked thus (*) have paid the Composition Fee in lieu of further annual subscriptions.

Elected

1867 ADAMS, WILLIAM, F.R.C.S., 37, Harrington square, N.W.

1864 AITKEN, WILLIAM, M.D., Madras Medical Service.

1859 ALDERSEY, WILLIAM HUGH, M.B. Lond., 37, Albany villas, Cliftonville, Brighton.

1861 ALDRIDGE, JOHN PETTY, M.D., Shirley House, Dorchester.

1859 ALLEN, GEORGE, M.D., 11, Soho square.

1859 AMSDEN, GEORGE JOHN, M.D., 85, St. Paul's road, Highbury, N.

1866 ANDREWS, HENRY CHARLES, M.D., 1, Oakley square, N.W.

1859 ANDREWS, JAMES, M.D., 149, Camden road, N.W.

1859 ARCHER, JOHN, F.R.C.S., Surgeon to the Birmingham Lying-in Hospital; 9, Carpenter road, Edgbaston, Birmingham.

1861 ARMSTRONG, JOHN, M.D., Gravesend, Kent.

1859 ASPINALL, THOMAS, Green street, Over Darwen, Lancashire.

1859 AVELING, JAMES H., M.D., Senior Surgeon to the Sheffield Hospital for Women; 5, Howard street, Sheffield. *Council* 1865–66. *Hon. Loc. Sec.*

1866 AVENT, NICHOLAS.

1859 AYLING, WILLIAM HENRY, L.R.C.P. Ed., 103, Great Portland street, W.

1864 BAKER, G. BENSON, 94, Lisson grove, N.W.

1867 BAKER, JOHN C., M.D., F.R.C.S. Edinb.; 132, Duke street, Liverpool.

1859 BAKER, JOHN WRIGHT, Surgeon to the Derbyshire General Infirmary; 102, Friar gate, Derby.

Elected

1859 BALLARD, THOMAS, M.D., 10, Southwick place, Hyde Park, W.

1864 BALLS-HEADLEY, WALTER, M.B., B.A. Cant., 49, David place, Jersey.

1859 BANNISTER, JOHN HENRY, 436, Oxford street, W.

1863 BARKER, EDWARD, F.R.C.S., Senior Surgeon to the Melbourne Hospital, Victoria.

1859 BARKER, SAMUEL, M.D., 14, Eaton place, Brighton.

1859 BARNES, ROBERT, M.D., F.R.C.P., Lecturer on Midwifery at St. Thomas's Hospital; Physician to the Royal Maternity Charity; 46, Finsbury square, E.C. *Vice-Pres.* 1859-60. *Council*, 1861-62, 1867-68. *Treas.* 1863-64. *Pres.* 1865-66.

1859 BARNETT, THOS. W., 72, Fore street, Limehouse, E.

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1861* BARTRUM, JOHN S., F.R.C.S., Surgeon to the Bath General Hospital; 41, Gay street, Bath.

1867 BASAN, HORACE, L.R.C.P. Ed., 77, Welbeck street, W.

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1859 BATEMAN, HENRY, F.R.C.S., 32, Compton terrace, Canonbury, Islington, N.

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1866 BELCHER, HENRY, M.D., L.R.C.P. Ed.; 10, Redcliffe Parade west, Bristol.

1867 BENNET, WILLIAM FORD, Resident Surgeon, St. Pancras Workhouse; King's road, N.W.

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Elected

1859 BILLINGHURST, HENRY, M.D., 5, Church row, Islington, N.

1859 BIRD, FREDERIC, M.D., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women at, the Westminster Hospital, Senior Physician to the Westminster Maternity Charity; 13, Grosvenor street, W. *Council*, 1859.

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1859 BLACKSTONE, JOSEPH, Park House, Gloucester road, Regent's park, N.W.

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1861* BLAKE, THOMAS WILLIAM, Hurstbourne Tarrant, Andover, Hants.

1859 BLAKE, VALENTINE W., F.R.C.S., Surgeon to the Birmingham and Midland Counties Lying-in Hospital, late Lecturer on Midwifery at the Sydenham College; 6, Old Square, Birmingham.

1866 BLEASE, THOMAS, Temple Lodge, Altrincham, Cheshire.

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1859 BRACE, WILLIAM HENRY, M.D., late Surgeon to the Bath United Hospital and Lying-in Charity, 1, Gay street, Bath. *Hon. Loc. Sec.*

1862 BRAITHWAITE, WILLIAM, M.D., late Lecturer on Midwifery, Leeds School of Medicine; Clarendon House, Clarendon road, Leeds.

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1859 Buzzard, Thomas, M.D., Assistant-Physician to the National Hospital for the Epileptic and Paralysed; 12, Green street, Grosvenor square, W.

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1863 Chisholm, Edwin, 46, Margaret st., Wynyard sq., Sydney.

1859 Cholmondeley, Joseph, Surgeon-Accoucheur to Queen Charlotte's Lying-in Hospital; 3, Nottingham place, Marylebone road, W. *Council*, 1859-60-61.

1859 Chowne, William Dingle, M.D., F.R.C.P., Consulting Physician to, and Lecturer on the Principles and Practice of Medicine and Obstetrics at, Charing Cross Hospital; 17, Hyde park place, Cumberland gate, W. *Council*, 1860-62.

1861 Church, William John, F.R.C.S., 22, Circus, Bath.

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1859 CLAREMONT, CLAUDE CLARKE, Millbrook House, 1, Hampstead road, N.W.

1861 CLARK, JAMES, M.D., 3, St. Mark's square, Regent's park, N.W.

1859 CLARK, JAMES FENN, 18, York terrace, Leamington. *Hon. Loc. Sec.*

1867 CLARKE, EDWARD GRIFFITHS, L.R.C.P. Ed., Mold, Flintshire.

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1859 CLAY, JOHN, Professor of Midwifery, Queen's College, Birmingham; 95, Newhall st., Birmingham. *Council,* 1868.

1859 CLAYTON, OSCAR, F.R.C.S., 5, Harley street, W.

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1865 COPEMAN, EDWARD, M.D., Physician to the Norfolk and Norwich Hospital; Upper King street, Norwich. *Hon. Loc. Sec.*

1867 CORNER, FRANCIS M., Surgeon to the Poplar Hospital; Manor House, Poplar, E.

1866 CORNWALL, JAMES, Fairford, Gloucestershire.

1860 CORRY, THOMAS CHARLES STEUART, M.D., L.R.C.P. Ed., Senior Surgeon to the Belfast General Dispensary; 9, Clarendon place, Belfast. *Council*, 1867. *Hon. Loc. Sec.*

1859 CORY, FREDERIC CHARLES, M.D., 8, Nassau place, Commercial road east, E. *Council*, 1867-68.

1863 COWARD, JOHN W., Christchurch, Canterbury, New Zealand [agents: Messrs. Alfred Hill and Sons, 11, Little Britain].

1859 CROFT, J. MCGRIGOR A. T., M.D., M.R.C.P., late Staff Surgeon and Senior Medical Officer to H.M. Ceylon Rifle Regiment; 8, Abbey road, St. John's Wood, N.W.

1866 CROFT, ROBERT CHARLES, L.R.C.P. Ed., 204, Camden road.

1861 CROSKERY, HUGH, L.R.C.S. Ireland; Chapelton, Jamaica, [agent; Mr. James Mackay, General Outfitter, 23, Catherine street, Devonport].

1860 CROSS, RICHARD, M.D., 5, Queen street, Scarborough, Yorkshire.

1867 CROUCHER, HENRY, West hill, Dartford, Kent.

1867 CROWTHER, EDWARD LODEWYK, L.R.C.P. Ed., late Resident Surgeon, Birmingham Lying-in Hospital; Hobarton, Tasmania.

1859 CULPEPER, WILLIAM MOE, 1, Brunswick terrace, Palace gardens, Kensington, W.

1862 CUMBERBATCH, LAURENCE TRENT, M.D., 25, Cadogan place, Belgrave square, S.W. *Council*, 1868.

1867 CUOLAHAN, HUGH, M.D., 9, Grange road, Bermondsey, S.E.

1859 CURGENVEN, J. BRENDON, 11, Craven hill gardens, Bayswater, W.

1866 DANE, THOMAS, Assistant-Surgeon, Western Ophthalmic Hospital, 24, New Finchley road, N.W.

Elected

1859 DAVIS, JOHN HALL, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, the Middlesex Hospital; Physician to the Royal Maternity Charity; Consulting-Physician-Accoucheur to the St. Pancras Infirmary; 24, Harley street, Cavendish square, W. *Council*, 1859, 1864-5. *Vice-Pres.* 1861-63. *Pres.* 1867-68.

1863 DAVIS, ROBERT ALEX., M.D., L.R.C.P. Ed. (exam.), Resident Physician, County Asylum, Burntwood, near Lichfield, Stafford.

1859 DAY, WILLIAM HENRY, M.D., Physician to the Margaret street Dispensary, 10, Manchester square.

1866 DEANS, JOHN, Shepherd's House, Cranbrook, Kent.

1861 DE LA MOTTE, HENRY D. C., Swanage, Dorset.

1859 DENNY, JOHN, L.R.C.P. Ed., 1, Sumner terrace, Onslow square, Brompton, S.W.

1866 DEWSNAP, WILLIAM, 1, Theresa terrace, Hammersmith, W.

1860 DICKENSON, JOHN, F.R.C.S., Hon. Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 DICKSON, JOSEPH, M.D., 56, Bath street, Jersey.

1859 DIXON, JOHN, M.D., 47, Jamaica road, Bermondsey, S.E.

1859 DRAGE, CHARLES, M.D., Hatfield, Herts. *Council*, 1861-64.

1859 DRUITT, ROBERT, M.R.C.P., Medical Officer of Health for St. George's, Hanover square; 37, Hertford street, Mayfair, W. *Council*, 1859-60. *Vice-Pres.* 1862-64.

1859 DRUITT, WILLIAM, F.R.C.S., Wimborne, Dorset.

1859 DUNCAN, JAMES, M.B., 8, Henrietta street, Covent garden, W.C.

1859 DUNCAN, PETER CHARLES, M.D., 46, Great Marlborough street, W.

1867 DUNDERDALE, WILLIAM, M.D., 25, Neville terrace, Hornsey road, N.

1859 DUNN, ROBERT, F.R.C.S., 31, Norfolk street, Strand, W.C. *Council*, 1860. *Vice-Pres.* 1861-62.

1861 EARLE, JAMES LUMLEY, M.D., Obstetric Surgeon to the Queen's Hospital; 92, New Hall street, Birmingham. *Council*, 1866-67.

1859* EASSON, JAMES, 23, Princes street, Cavendish square, W., and Stoke Pogis.

Elected

1861 EASTLAKE, HENRY E., F.K.Q.C.P. Ireland, Medical Officer to the British Lying-in Hospital, and Accoucheur to the St. Marylebone General Dispensary; 48, Welbeck street, W. *Council*, 1866-68.

1866 EASTON, JOHN, M.D., 20, Connaught square, W.

1867 EDIS, ARTHUR W., M.B. Lond., Physician-Accoucheur to the St. James's Dispensary; 23, Sackville street, W.

1861 EDWARDS, THOMAS EDWIN, L.R.C.P. Lond., 98, Gloucester crescent, Hyde park, W.

1859 ELKINGTON, FRANCIS, M.D., Consulting Accoucheur to the Birmingham and Midland Counties Lying-in Hospital, and late Lecturer on Midwifery at Sydenham College. (Clarendon, Frontenac, Canada West.) *Council*, 1859. *Vice-Pres.* 1860-61.

1859 ELLIOTT, ROBERT, F.R.C.S. Senior Surgeon to the Chichester Infirmary; North street, Chichester.

1866 ELLIOTT, ROBERT ARTHUR, Assistant-Surgeon 95th Regiment, (India). Chichester.

1862 ELLIS, EDWARD, M.D., Physician to the Samaritan Free Hospital, and to the South London Hospital for Children; 118, Warwick street, Belgravia, S.W.

1861 ELLIS, ROBERT, Obstetric Surgeon to the Chelsea, Brompton, and Belgrave Dispensary; 63, Sloane street, S.W. *Council*, 1868.

1862 ELLISON, JAMES, M.D., 14, High street, Windsor, Berks.

1859 EVANS, GRIFFITH FRANCIS DORSETT, M.D., Crescent, Shrewsbury.

1861 EWEN, HENRY, F.R.C.S., Long Sutton, near Wisbeach, Lincolnshire.

1865 FAIRBANK, THOMAS, M.D., Surgeon to H.M. the Queen and the Royal Household, Windsor Castle; Sheet street, Windsor.

1859 FAIRCLOTH, RICHARD, F.R.C.S., Newmarket, Cambridgeshire.

1867 FAIRLAND, EDWIN JAMES, L.R.C.P. Ed., Guy's Hospital.

1861 FARR, GEO. F., L.R.C.P. Edin., 20, West square, Southwark, S.

Elected

1859 FERGUSSON, SIR WILLIAM, Bart., F.R.C.S., F.R.S., Sergeant-Surgeon to H.M. the Queen, Professor of Surgery in King's College and Surgeon to King's College Hospital, Consulting Surgeon to the Samaritan Free Hospital; 16, George Street, Hanover square, W. *Vice-Pres.* 1862-63.

1865 FERRIS, J. SPENCER, 62, Great Russell Street, W.C.

1861 FETHERSTON, GERALD H., B.A., M.D. Melb., L.R.C.P. Edin.; Melbourne Lying-in Hospital, and Prahran, near Melbourne, Victoria. *Hon. Loc. Sec.*

1865 FITZPATRICK, THOMAS, M.D., 30, Sussex gardens, Hyde park, W.

1865 FOWLER, JAMES, F.S.A., Hon. Surgeon to the Clayton Hospital and Wakefield General Dispensary; 13, South Parade, Wakefield. *Hon. Loc. Sec.*

1866 FOX, CORNELIUS BENJAMIN, M.D., South Cliff, Scarborough.

1862 FRAIN, JOSEPH, M.D., Hon. Surgeon to the South Shields Dispensary, Frederick street, South Shields.

1861 FRANKLAND, THOMAS THRUSH, Surgeon to the Ripon Dispensary, Ripon, Yorkshire.

1867 FREEMAN, HENRY W., 38, Gay street, Bath.

1867 FRYER, CHARLES, L.K. & Q.C.P. Ireland; 83, Rumford street, Chorlton-on-Medlock, Manchester.

1867 FULLER, CHARLES C., 29, Albany street, Regent's park, N.W.

1863 GALTON, JOHN HENRY, M.B. Lond., Foo-choo, China.

1863 GARMAN, HENRY VINCENT, Kent House, Bow road, E.

1859 GASKOIN, GEORGE, 3, Westbourne park, W.

1864 GAUNT, JOHN SMITH, The Shrubbery, Alvechurch, Worcestershire.

1862 GAYTON, WILLIAM, 85, Brick lane, Spitalfields, N.E.

1859 GERVIS, HENRY, M.D., Assistant Obstetric Physician to, and Lecturer upon Forensic Medicine at, St. Thomas's Hospital; Consulting Physician to the Deaf and Dumb Asylum, and to the Asylum for Fatherless Children; 12, St. Thomas's street, Southwark, S.E. *Council*, 1864-66. *Hon. Sec.* 1867-68.

1866 GERVIS, FREDERICK HEUDEBOURCK, 33, Adelaide road, Haverstock hill, N.W.

1866 GIDDINGS, WILLIAM KITTO, Calverley, near Leeds, Yorkshire.

Elected

1865 GILES, GEORGE FREDERICK, M.D., 3, York buildings, Hastings.

1860 GILL, SAMUEL L., L.R.C.P. Edin., 4, Campbell terrace, Bow road, E.

1867 GITTINS, JOHN, L.R.C.P. Ed., St. Olave's Union, Parish street, Southwark, S.E.

1861 GOSS, SAMUEL DAY, M.D. St. And., F.R.G.S., 111, Kennington park road, S.

1859 GOULSTONE, JOHN GRIFFITH, M.D., 30, Clarence street, Liverpool.

1861 GREAM, GEORGE THOMPSON, M.D., F.R.C.P., Physician-Accoucheur to H.R.H. the Princess of Wales; 2, Upper Brook street, Grosvenor square, W. *Council*, 1862-63. *Vice-Pres.* 1864-66.

1859 GREENHALGH, ROBERT, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Bartholomew's Hospital; Consulting Physician to the Samaritan Free Hospital, and to the City of London Lying-in Hospital; 77, Grosvenor street, W. *Council*, 1863, 1867-68. *Vice-Pres.* 1864-66.

1863 GRIFFITH, G. DE GORREQUER, Physician to the Hospital for Women and Children, Pimlico; Physician-Accoucheur to St. Saviour's Maternity; 9, Lupus street, St. George's square, S.W.

1859 GRIFFITH, THOMAS TAYLOR, F.R.C.S., Consulting Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 GRIMSDALE, THOS. F., L.R.C.P. Ed., Surgeon to the Lying-in Hospital, and late Lecturer on Diseases of Children, &c., at the Royal Infirmary School of Medicine; 29, Rodney street, Liverpool. *Council*, 1861-62.

1866 GROSJEAN, JAMES KEITH, M.D., 11, Sheffield gardens, Kensington, W.

1865 GWYN, GEORGE F., Westcroft House, Hammersmith, W.

1867 HADAWAY, JAMES, L.R.C.P. Ed., 47B, Welbeck street, Cavendish square.

1859 HADEN, FRANCIS SEYMOUR, F.R.C.S., 62, Sloane street, S.W. *Council*, 1861-63, 1868. *Vice-Pres.* 1865-67.

Elected

1863 HAILEY, HAMMETT, The Elms, Newport Pagnell, Bucks.

1859 HALL, ALFRED, M.D., Senior Physician to the Brighton Dispensary; 30, Old Steyne, Brighton. *Council,* 1864-65. *Vice-Pres.* 1866-68. *Hon. Loc. Sec.*

1859 HALL, FREDERICK, 1, Jermyn street, St. James's, S.W.

1867 HALL, JOHN HENRY WYNNE, L.R.C.P. Ed., Barking road, Essex, E.

1862 HALL, WILLIAM, Lecturer on Physiology and Diseases of Women and Children, Leeds School of Medicine; Hillary place, Leeds. *Hon. Loc. Sec.*

1860 HARDEY, KEY, Surgeon to the West City Dispensary; 4, Wardrobe place, Doctors' Commons, E.C.

1859 HARPER, PHILIP H., F.R.C.S., 30, Cambridge street, Hyde park, W.

1865 HARRER, CARL, M.D, 16, Artillery place, Finsbury square, E.C.

1863 HARRIES, GWYNNE, M.D. Lond., Pembroke Dock, South Wales.

1859 HARRINSON, ISAAC, F.R.C.S., Castle street, Reading, Berks. *Council,* 1862-65. *Hon. Loc. Sec.*

1862 HARRIS, CHARLES, M.D., Northiam, Sussex.

1861 HARRIS, HERBERT ROBEY, 52, Bolton street, Bury, Lancashire.

1867 HARRIS, WILLIAM H., M.D., Ostacamund, Neilgherries, India [agent: Mr. H. K. Lewis, Gower street].

1861 HARRIS, WILLIAM JOHN, 4, Bedford row, Worthing.

1865 HARVEY, ROBERT, M.D., Civil Surgeon of Bhurtpore, near Agra, India [*viâ* Bombay].

1859 HARVEY, WILLIAM, 48, Lonsdale square, Islington, N.

1864 HASENFELD, EMMANUEL, M.D., Pesth, Hungary.

1867 HAVILAND, ALFRED, late Surgeon to the Bridgwater Infirmary; 34, Bessborough Street, S.W.

1861 HAVILAND, EDWARD SAVAGE, M.D., 13, Lyon terrace, Maida hill, W.

1865 HAYES, HAWKESLEY ROCHE, Basingstoke, Hants.

1862 HAYMAN, CHARLES CHRISTOPHER, M.D., 22, Grand parade, Eastbourne, Sussex.

Elected

1864 HEAD, EDWARD, M.B., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; 91, Harley street, W.

1865 HECKFORD, NATHANIEL.

1867 HEMBROUGH, JOHN WILLIAM, M.D., Waltham, Grimsby.

1860 HESS, AUGUSTUS, M.D., Physician to the Jews' Hospital, Norwood; 14, Artillery place, Finsbury square, E.C.

1859 HEWITT, GRAILY, M.D., F.R.C.P., Professor of Midwifery in University College, London, and Obstetric Physician to University College Hospital; 36, Berkeley square, W. *Hon. Sec.* 1859-64. *Treas.* 1865-66. *Vice-Pres.* 1867-68.

1862 HEWITT, TOM SMITH, M.D., Ivy Cottage, Winkfield, Windsor, Berks.

1867 HICKINBOTHAM, JAMES, L.R.C.P. Ed., 405, Nechell's Park road, Birmingham.

1860 HICKS, JOHN BRAXTON, M.D., F.R.S., Assistant Physician-Accoucheur to, and one of the Lecturers on Midwifery and the Diseases of Women and Children at, Guy's Hospital; Physician to the Royal Maternity Charity, and to the Royal Infirmary for Diseases of Children and Women, Waterloo road; 9, St. Thomas's street, Southwark, S.E. *Council*, 1861-62. *Hon. Sec.* 1863-65. *Vice-Pres.* 1866-68.

1860 HIGGS, THOMAS FREDERIC, L.R.C.P. Edin.; Wolverhampton street, Dudley, Worcestershire.

1859 HIRD, FRANCIS, F.R.C.S., formerly Surgeon to the Royal Infirmary for Children; Surgeon to, and Lecturer on Surgical Diseases of Women at, Charing Cross Hospital; 13, Old Burlington street, W. *Council*, 1861-62.

1865 HODDER, EDWARD M., M.D., Toronto, Canada West.

1859 HODGES, RICHARD, M.D., F.R.C.S., 1, Montagu street, Portman square, W.

1859 HODGSON, GEORGE FREDERICK, 52, Montpellier road, Brighton.

1864 HOFFMEISTER, WILLIAM CARTER, M.D., Surgeon to the Queen in the Isle of Wight; Cowes, Isle of Wight.

1859 HOLMAN, ANDREW, 10, John street, America square, E.C.

Elected

1859 HOLMAN, CONSTANTINE, M.D., Reigate, Surrey. *Council*, 1867-68.

1860 HOLMAN, HENRY MARTIN, M.D., Hurstpierpoint, Sussex.

1864 HOOD, WHARTON PETER, M.D., 65, Upper Berkeley street, W.

1866 HORNIBLOW, RICHARD E. BRAIN, M.D., 36, Upper parade, Leamington.

1861 HORTON, GEORGE EDWARD, Castle street, Dudley, Worcestershire.

1864 HOUGHTON, HENRY GEORGE, L.K. & Q.C.P. Ireland, 6, Mount street, Grosvenor square.

1859 HUSSEY, EDWARD LAW, F.R.C.S., Senior Surgeon to the Radcliffe Infirmary, and Consulting Surgeon to the County Lunatic Asylum and the Warneford Asylum; 104, St. Aldate's, Oxford.

1859 HUTCHINSON, JONATHAN, Surgeon to the London Hospital; 4, Finsbury circus, E.C.

1865 HUTCHINSON, THOMAS STEERS, L.R.C.P. Edin., Newington, Sittingbourne, Kent.

1861 HUTTON, CHARLES, M.D., Physician to the General Lying-in-Hospital; 26, Lowndes street, Belgrave square, S.W.

1859 ILOTT, JAMES WILLIAM, Bromley, Kent.

1859 IMAGE, WILLIAM EDMUND, F.R.C.S., Senior Surgeon to the Suffolk General Hospital; Bury St. Edmund's, Suffolk.

1864 JACKSON, EDWARD, M.B., Surgeon to the Sheffield Hospital for Women; Fern Bank, Glossop road, Sheffield.

1864 JACKSON, ROBERT, M.D., 53, Notting Hill square, W.

1861 JACKSON, THOMAS HAYES, M.D., F.R.C.P. Edin., Senior Consulting-Surgeon to the Darlington Hospital; 18, Market place, Darlington, Durham.

1868 JAMES, ALFRED, M.D., Perry vale, Forest Hill.

1859 JAMES, HENRY, F.R.C.S., Holmwood, Weybridge, Surrey. *Council*, 1862-63.

1862 JAY, FREDERICK FITZHERBERT, Watton, Thetford, Norfolk.

1863 JENKINS, ROBERT W., 13, Charlotte street, Bedford square, W.C.

1859 JENNINGS, JOSEPH C. S., Abbey House, Malmesbury, Wilts.

Elected

1860 JEPSON, HENRY, F.R.C.S., Surgeon to the Kingston Dispensary; Hampton, Middlesex, S.W.

1867 JESSOP, WALTER, 4, Royal Crescent, Cheltenham.

1862 JOHNSON, EDWARD, M.D., 19, Cavendish place, Cavendish square, W.

1863 JOHNSON, HENRY SCHOLFIELD, M.D., West street, Congleton, Cheshire.

1861 JONES, EDWARD, M.D., The Park, Sydenham, Kent.

1859 JONES, GEORGE, 12, New hall street, Birmingham.

1868 JONES, JOHN, 60, King street, Regent street, W.

1859 JONES, JOHN WILLIAM, Port Dinorwic, near Bangor, Caernarvonshire.

1866 JONES, ROBERT, 19, Stretford road, Hulme, Manchester.

1867 JUNKER, F. ETHELBERT, M.D., 36, Mount street, Grosvenor square, W.

1859 KEALY, JOHN ROBERT, M.D., Ashley House, Gosport, Hants. *Hon. Loc. Sec.*

1859 KEELE, GEORGE THOMAS, 81, St. Paul's road, Highbury, N.

1859 KENDALL, THOMAS MARSTERS, F.R.C.S., Medical Attendant to their R.H. the Prince and Princess of Wales at Sandringham, Surgeon to the West Norfolk and Lynn Hospital; King's Lynn, Norfolk.

1861 KERBEY, WILLIAM HOLMAN, Weobley, Herefordshire.

1865* KERNOT, GEORGE CHARLES, M.D., 3, Chrisp street, Poplar, E.

1859 KIALLMARK, HENRY WALTER, 66, Princes square, Westbourne grove, W.

1860 KINGSFORD, EDWARD, F.R.C.S., Surgeon to the Sunbury Dispensary; Sunbury, Middlesex, S.W.

1862 KIRKPATRICK, JOHN RUTHERFORD, M.B. Dublin, 32, Rutland square, Dublin.

1860 KISCH, JOSEPH, 2, Circus place, Finsbury circus, E.C.

1867 KNAGGS, HENRY G., M.D., 49, Kentish Town road, N.W.

1867 LA FARGUE, FRED. G. H., M.D., Godalming, Surrey.

1862 LAMB, JOHN STEWART, M.D., 4, Windsor terrace, Maida vale, W.

1867 LANGFORD, CHARLES P., 187, Goswell road, E.C.

1859 LANGMORE, J. CHARLES, M.B., F.R.C.S., 12, Sussex gardens, W. *Council*, 1861-64.

Elected

1866 LANGSTON, THOMAS, L.R.C.P. Ed., 29, Broadway, Westminster, S.W.

1862 LANPHIER, RICHARD, M.B. Dub., Alford, Lincolnshire.

1867 LEAF, WALTER, Surgeon to the St. Marylebone General Dispensary; 30, Maddox street, W.

1859 LEE, NEWTON B. C., 11, Talbot terrace, Westbourne park, W.

1859 LEECH, EDWARD, Pallant, Chichester, Sussex.

1860 LEISHMAN, WILLIAM, M.D., Physician to the Glasgow Royal Infirmary, and to the University Lying-in Hospital; 7, Blythswood square, Glasgow. *Council*, 1866-68.

1867 LEVY, JULIUS LAWRENCE, L.R.C.P. Ed., 100, Westbourne terrace, Hyde park, W.

1867 LILLEY, FREDERICK JOHN, L.R.C.P. Ed., Cambridge House, South Lambeth road, S.

1867 LITHGOW, JAMES, M.D., Consulting-Surgeon to the Weymouth Infirmary; 10, Royal terrace, Weymouth.

1859 LOCOCK, SIR CHAS., Bart., M.D., F.R.C.P., 26, Hertford street, Mayfair, W. *Honorary President.*

1859 LOMBE, THOMAS ROBERT, M.D., Bemerton, Torquay.

1861 LOVE, GILBERT, Wimbledon, Surrey, S.W.

1866 LOVEGROVE, CHARLES, M.D., Sevenoaks, Kent.

1866 LOW, ALEX. JAMES, Le Coin, St. Brelade's, Jersey.

1862 LOWE, GEORGE, F.R.C.S., Burton-on-Trent, Staffordshire.

1866 LUCEY, WILLIAM CUBITT, M.D., Norfolk villas, Junction road, Upper Holloway, N.

1862 MACKENZIE, GEORGE WISE, Thetford, Norfolk.

1859 MACKINDER, DRAPER, M.D., Consulting Surgeon to the Gainsborough Dispensary; Gainsborough, Lincolnshire.

1866 MACKINTOSH, HUGH, M.D., 84, Brompton road, S.W.

1866 MADDEVER, JOHN COOMBE, M.D., 59, High street, Rothesay.

1859 MACRAE, JOHN, 4, High street, Lewes, Sussex.

1861 MCVEAGH, DENNIS, L.K. & Q.C.P. Ireland, 33, Bishop street, Coventry, Warwickshire.

1859 MADGE, HENRY, M.D., 32, Fitzroy square, W. *Council*, 1863-65.

Elected

1868 MARCH, HENRY COLLEY, M.D., 18, Lord street, Rochdale.

1860 MARLEY, HENRY FREDERICK, Padstow, Cornwall.

1859 MARLEY, RICHARD, Bromyard, near Worcester, Herefordshire.

1868 MARRIOTT, CHARLES WILLIAM, Dynevor House, Leamington, Warwickshire.

1862 MARRIOTT, ROBERT BUCHANAN, Swaffham, Norfolk.

1862 MARSHALL, JOHN, Liverpool House, Dover.

1859 MARSHALL, JOHN BRAKE, Nightingale road Downs, Clapton, N.E.

1859 MARSHALL, PETER, 43, Bedford square, W.C.

1860 MARTIN, HENRY VICTOR, F.R.C.S., 45, Acacia road, Regent's park, N.W.

1864 MARTIN, LAURENCE J., M.D., 126, Collins street east, Melbourne, Victoria.

1859 MARTYN, WILLIAM, M.D., F.R.C.S., 6, Trevor terrace, Rutland gate, Brompton, S.W.

1866 MATTEI, ANTOINE, M.D., Professor of Midwifery, Rue Rivoli 150, Paris.

1861 MATTHEWS, JOHN, M.D., 4, Mylne street, Myddelton square, E.C.

1867 MAY, HENRY, 395, Nechell's Park road, Birmingham.

1859 MEADOWS, ALFRED, M.D., Physician-Accoucheur to the General Lying-in Hospital, York road; Physician to the Hospital for Women, Soho square; 27, George street, Hanover square, W. *Council*, 1862-64. *Hon. Sec.* 1865-66. *Hon. Lib.* 1865. *Treas.* 1867-68.

1867 MICKLEY, ARTHUR GEORGE, M.B. Lond., House Surgeon, General Hospital, Nottingham.

1865 MIDDLETON, JOHN W., M.D., 8, Rue Marie de Bourgogne, Brussels.

1859 MILES, CHARLES, Surgeon to the Paddington Dispensary; 13, Conduit street west, Westbourne terrace, W.

1867 MILLER, BENJAMIN, 49, Maddox street, W.

1859 MITCHELL, JOSEPH THOMAS, F.R.C.S., 8, Percy place, Clapham road, S. *Council*, 1863-67.

1867 MITCHELL, ROBERT NATHAL, M.D., 1, Amersham park villas, New Cross, S.E.

Elected

1866 MOLLOY, WM. THOMAS, Balmoral, Victoria.

1859 MOORHEAD, JOHN, M.D., Surgeon to the Weymouth Infirmary and Dispensary; Weymouth, Dorset.

1863 MORGAN, EDWARD, Park street, Llanelly, Caermarthenshire.

1865 MOSELEY, GEORGE, F.R.C.S., 51, Priory road, Kilburn, N.W.

1865 MOXEY, DAVID ANDERSON, M.D., Edinburgh House, Turnham green, Middlesex.

1859 MOYLES, THOMAS, M.D., 109, Broad street, Birmingham.

1863 MURPHY, WILLIAM, M.D., Peitermaritzburg, South Africa.

1859 MURRAY, GUSTAVUS CHARLES P., M.D., Obstetric Physician to the Great Northern Hospital, Senior Physician to the British Lying-in Hospital; 17, Green st., Grosvenor square, W. *Council*, 1864-65. *Hon. Sec.* 1866-68.

1859 MUSGRAVE, JOHNSON THOMAS, L.R.C.P. Ed., 39, Finchley road, N.W. *Council*, 1859-60.

1859 NAPPER, ALBERT, Broad Oak, Cranleigh, Guildford, Surrey. *Council*, 1866-68.

1863 NASON, JOHN JAMES, M.B. Lond., 11, Bridge street, Stratford-upon-Avon.

1859 NASON, RICHARD BIRD, Nuneaton, Warwickshire.

1859 NEAL, JAMES, M.D., Hon. Surgeon to the Lying-in Hospital, Birmingham; 85, New Hall street, Birmingham.

1867 NEATE, CHARLES, Weobley, Herefordshire.

1866 NEILD, JAMES EDWARD, M.D., Lecturer on Forensic Medicine, Melbourne University; 166, Collins street east, Melbourne.

1859 NEWMAN, WILLIAM, M.D., St. Martin's, Stamford-Baron, Northamptonshire.

1859 NEWTON, EDWARD, F.R.C.S., 4, Upper Wimpole street, W. *Council*, 1865-67.

1861 NICHOLS, GEORGE W., Augusta House, Rotherhithe, S.E.

1859 NUNN, THOMAS WILLIAM, F.R.C.S., Surgeon to the Middlesex Hospital; 8, Stratford place, Oxford street, W. *Council*, 1868.

1860 OAKSHOTT, JOHN, Highgate, N.

Elected

1859 OLDHAM, HENRY, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, Guy's Hospital; 26, Finsbury square, E.C. *Vice-Pres.* 1859. *Council,* 1860, 1865-66, 1868. *Treas.* 1861-62. *Pres.* 1863-64.

1859 OLDHAM, JAMES, F.R.C.S., Consulting Surgeon to the Brighton Lying-in Institution; 53, Norfolk Square, Brighton. *Council,* 1866-68.

1865 ORTIZ, MANUEL MARIA, M.D., Henry street, Port of Spain, Trinidad.

1863 OSWALD, JAMES WADDELL JEFFRIES, Withernsea, Holderness, Yorkshire.

1863 OWEN, ALBERT PHILIP, Churchfield place, Margate, Kent.

1861 OWEN, WILLIAM B., 61, Cleveland square, Hyde park, W.

1859 PALFREY, JAMES, M.D., Assistant Obstetric Physician to the London Hospital, and Obstetric Physician to the Farringdon General Dispensary; 25, Finsbury place, E.C.

1867 PARKS, JOHN, The Wylde, Bury, Lancashire.

1863 PARSON, EDWARD, M.D. Physician-Accoucheur to, and Lecturer on Midwifery and Diseases of Women and Children at, the Charing Cross Hospital; Medical Officer for Out-patients to Queen Charlotte's Lying-in Hospital; 8, Bolton street, Mayfair, W.

1865* PATERSON, JAMES, M.D., Rosewall, Partick, Glasgow.

1860 PAYNE, CHARLES HENRY, M.D., Wimbledon, Surrey, S.W.

1866 PEACOCK, ALBERT LOUIS, Ford Cottage, Churchinford, near Honiton, Devonshire.

1867 PEARCE, GEORGE, M.D., New Walk Gates, Leicester.

1864 PEARSON, DAVID RITCHIE, M.D., 23, Upper Phillimore place, Kensington, W.

1859 PEIRCE, R. KING, 16, Norland place, Notting Hill, W.

1866 PHILLIPS, JOHN JONES, M.D., Demonstrator of Anatomy at Guy's Hospital, and Physician to the Royal Infirmary for Children and Women, Waterloo road; 43, Trinity square, S.E.

1866 PILCHER, WILLIAM JOHN, 43, West street, Boston, Lincolnshire.

1859 PINCHARD, BENJAMIN, M.D., Cottenham, Cambridgeshire.

Elected

1864 PLAYFAIR, WILLIAM, M.D., Assistant-Physician for the Diseases of Women and Children to King's College Hospital; 5, Curzon street, Mayfair, W. *Council*, 1867. *Hon. Librarian*, 1868.

1859* POLLARD, WILLIAM, Surgeon to the Torbay Hospital; Southlands, Torquay, Devon.

1860 POLLOCK, TIMOTHY, M.D., 26, Hatton garden, E.C. *Council*, 1866-68.

1860 PORTER, CHARLES, 54, Digbeth, Birmingham.

1859 POTTER, JEPHSON, M.D., Physician to the Liverpool General Hospital for Consumption; 3, Brooklands, Southport, Liverpool.

1864 POTTER, JOHN BAPTISTE, M.D., 3, Craven hill, Hyde park, W.

1859 POUND, GEORGE, Odiham, Hants.

1863 POWELL, JOSIAH T., M.D., 347, City road, E.C.

1864 POWELL, LLEWELLYN, Christchurch, Canterbury, New Zealand.

1864 PRICE, WILLIAM NICHOLSON, Lecturer on Midwifery at the Leeds School of Medicine; 7, East parade, Leeds.

1863 PRICE, WILLIAM PRESTON, M.D., Surgeon to the Metropolitan Infirmary for Scrofulous Children, Margate; 1, Ethelbert Crescent, Margate.

1859 PRIESTLEY, W. O., M.D., F.R.C.P., Professor of Midwifery in King's College, London, Physician-Accoucheur to King's College Hospital, and Consulting Physician-Accoucheur to the St. Marylebone Infirmary; 17, Hertford street, Mayfair, W. *Council*, 1859-61, 1865-66. *Vice-Pres.* 1867-68.

1862 PRINCE, FREDERIC, Sawston, Cambridgeshire.

1864 PUGH, WILLIAM RUSS, M.D., 131, Collins street east, Melbourne, Victoria.

1859 RADFORD, THOMAS, M.D., Consulting Physician to St. Mary's Hospital, Manchester; Moor field, Higher Broughton, Manchester. *Vice-Pres.* 1859.

1859 RAMSAY, JOHN ALLEN, L.R.C.P. Ed., Great Shelford, Cambridge.

1860 RAMSBOTHAM, JOHN HODGSON, M.D., 16, Park place, Leeds.

Elected

1859 RANDALL, JOHN, M.D. Lecturer on Medical Jurisprudence, St. Mary's Hospital Medical School; Medical Officer, St. Marylebone Infirmary; 14, Portman street, Portman square, W.

1860 RANSOM, ROBERT, M.D., F.R.C.S., 5, Jesus lane, Cambridge.

1861 RASCH, ADOLPHUS A. F., M.D., Hon. Phys. to the Eastern Dispensary of the German Hospital; 7, South street, Finsbury square, E.C.

1859 RAY, EDWARD, M.D., F.R.C.S., Dulwich, Surrey. S. *Council*, 1864-66 [deceased].

1860* RAYNER, JOHN, M.D., Swaledale House, Quadrant road north, Highbury New park, N.

1859 RAYNES, HENRY, Gringley-on-the-hill, Bawtry, Yorkshire.

1859 REE, HENRY PAWLE, L.R.C.P. Ed., F.R.C.S., St. John's, Fulham, S.W.

1859 REMINGTON, THOMAS, M.D., Medical Officer to the Clapham General Dispensary; 1, Grove place, North Brixton, S.

1860 RENTON, JOHN, Orchard House, Shotley bridge, Gateshead, Durham.

1862 RICHARDS, DAVID, 8, St. George's place, Brighton, Sussex.

1860 RICHARDS, JOHN SMITH CROSLAND, 36, Bedford square, W.C.

1859 RICHARDS, SAMUEL, M.D., 36, Bedford square, W.C. *Council*, 1864-66.

1862 RICHARDS, SMITH, 36, Bedford square, W.C.

1859 RICHARDSON, RICHARD, L.R.C.P. Edinb., Rhayader, Radnorshire.

1859 RICHARDSON, WILLIAM THOMAS, Ivy House, Highgate, N.

1859* ROBERTS, DAVID LLOYD, M.D., Surgeon to St. Mary's Hospital, Manchester; 23, St. John's street, Deansgate, Manchester. *Hon. Loc. Sec. Council*, 1868.

1867 ROBERTS, DAVID W., M.D., 56, Manchester street, W.

1860 ROBERTS, ROBERT PRICE, Shamrock House, Rhyl, Flintshire.

1867 ROBINSON, C. A. (late of Kingston, Jamaica), Hospital for Women, Soho square.

1859 ROBINSON, THOMAS, M.D., 64, Lamb's Conduit street, W.C.

Elected

1859 ROGERS, WILLIAM RICHARD, M.D., Physician to the Samaritan Free Hospital; 56, Berners street, Oxford street, W.

1859 ROOTS, WILLIAM SUDLOW, F.R.C.S., F.L.S., Surgeon to the Royal Establishment at Hampton Court, Kingston-on-Thames, S.W.

1860 ROPER, ALFRED GEORGE, 57, North End, Croydon, Surrey.

1865 ROPER, GEORGE, Surgeon to the Royal Maternity Charity; 180, Shoreditch, N.E.

1859 ROSE, HENRY COOPER, M.D., High street, Hampstead, N.W.

1859 ROSS, DANIEL, Surgeon to the Metropolitan Police; 10, Commercial place, Commercial road east, E.

1859 ROSS, GEORGE, M.D., 11, Hart street, Bloomsbury, W.C.

1859 ROUTH, CHARLES HENRY FELIX, M.D., Physician to the Samaritan Free Hospital for Women and Children; 52, Montagu square, W. *Council*, 1859-60-61.

1866 RUGE, GEORGE PHILIP, M.D., 1, Stockwell villas, Clapham road, Stockwell, S.

1861 RUSSELL, WILLIAM ALEXANDER, L.R.C.P. Edin.; St. Peter street, St. Alban's, Herts.

1866 SABOIA, V., M.D., Rio de Janeiro.

1864 SALTER, J. H., Darcy House, Tolleshunt Darcy, Kelvedon, Essex.

1860 SANDERS, GODFREY, F.R.C.S., 17, Brewer street, Maidstone, Kent.

1865 SANSOM, ARTHUR ERNEST, M.D., Physician to the Royal Hospital for Diseases of the Chest, City road; 29, Duncan terrace, Islington, N.

1863 SAVAGE, HENRY, M.D., Consulting Physician to the Samaritan Hospital for Women; 45, Baker street, and South Laurie park, Norwood, S.

1859 SCOTT, JOHN, F.R.C.S., Surgeon to the Hospital for Women, Soho square; 49, Harley street, Cavendish square, W. *Council*, 1868.

1860 SEDGWICK, LEONARD WILLIAM, M.D., 2, Gloucester terrace Hyde park, W.

1863 SEQUEIRA, HENRY LITTLE, 1, Jewry street, Aldgate, E.C.

Elected

1866 SEQUEIRA, JAMES SCOTT, 34, Leman street, Goodman's fields, E.

1860 SEWELL, CHARLES BRODIE, M.D., 76, Guilford street, Russell square, W.C., and 13, Fenchurch street.

1862 SHARMAN, MALIM, Surgeon to the Birmingham Free Hospital for Sick Children; 18, New Hall street, Birmingham.

1859 SHARPIN, HENRY WILSON, F.R.C.S., Surgeon to the Bedford General Infirmary, Bedford.

1860 SHAW, GEORGE, Portland House, Battersea, S.W.

1859 SHEARMAN, EDWARD JAMES, M.D., Moorgate, Rotherham, Yorkshire.

1859 SHEEHY, WILLIAM HENRY, L.R.C.P. Edin., 4, Claremont square, Pentonville, N.

1867 SHEPHERD, FREDERICK, L.R.C.P. Ed., 28, Rochester road, Kentish Town, N.W.

1866 SHERATON, GEORGE ROBERT, L.R.C.P. Edin., Sedgefield, Ferryhill, Durham.

1862 SHILLINGFORD, ISAAC SHORTLAND, 124, Hill street, Peckham, S.E.

1859 SHIPTON, WILLIAM PARKER, Buxton, Derbyshire.

1860 SHIRLEY, HENRY JAMES, F.R.C.S. Finchingfield, Braintree, Essex.

1861 SHORTT, JOHN, M.D., Surgeon H.M. Madras Army, and Superintendent-General of Vaccination, Madras Presidency. *Hon. Loc. Sec.* [agents: Messrs. Finlay, Hodgson, and Co., St. Helen's].

1860 SKINNER, THOMAS, M.D., Obstetric Physician to the Lying-in Hospital; 1, St. James's road, Liverpool. *Council,* 1865-66. *Hon. Loc. Sec.*

1859 SLEEMAN, PHILIP ROWLING, F.R.C.S., Montrose House, Queen's road, Clifton.

1861 SLOMAN, SAMUEL GEORGE, Farnham, Surrey.

1861 SLYMAN, WILLIAM DANIEL, 26, Caversham road, Kentish Town, N.W.

1860 SMART, THOMAS TOVEY, L.R.C.P. Edinb., South Villa, Bedminster, Bristol.

1859 SMILES, WILLIAM, M.D., Surgeon to the House of Correction, Cold Bath Fields; 44, Bedford square, W.C.

Elected

1865 SMITH, H. FLY, M.B., 41, Chepstow villas, Westbourne grove, W.

1862 SMITH, HENRY, M.D., 8, St. Mary's terrace, Paddington, W.

1867 SMITH, HEYWOOD, M.B. Oxon., Physician-Accoucheur to the St. George's Dispensary; 42, Park street, Grosvenor square, W.

1860 SMITH, JOHN, Coseley, near Bilston, Staffordshire.

1860 SMITH, JOSEPH EVANS, Oxford road, Hay, Breconshire.

1859 SMITH, PROTHEROE, M.D., Physician to the Hospital for Women, Soho square; 42, Park street, Grosvenor square, W.

1859 SMITH, WILLIAM JOHNSON, M.D., Consulting Physician to the Weymouth Infirmary and Dispensary; Greenhill, Weymouth, Dorset.

1859 SMITH, W. TYLER, M.D., F.R.C.P., Physician-Accoucheur to, and Lecturer on Midwifery and Diseases of Women and Children at, St. Mary's Hospital; 21, Upper Grosvenor street, W. *Treasurer & Vice-Pres.* 1859-60. *Pres.* 1861-62. *Council*, 1863-68.

1860 SNELL, EDMUND, L.R.C.P. Ed., 59, Stepney green, E.

1859 SOMERVILLE, CHARLES, M.D., Bloxwich, Walsall, Staffordshire.

1866 SOPER, WILLIAM, Medical Officer, Jews' Hospital, Norwood; 4, Clapham rise, S.

1859 SPENCER, GEORGE, 8, Kensington Park road, W.

1860 SPENCER, LAWRENCE, M.D., 9, Winckley square, Preston, Lancashire.

1862 SPRY, GEORGE FREDERICK, M.D., Assistant-Surgeon 2nd Life Guards.

1867 SQUAREY, C. E., Resident Medical Officer, University College Hospital, Gower street, W.C.

1859 SQUIRE, WILLIAM, 6, Orchard street, Portman square, W. *Council*, 1866-68.

1860 STEDMAN, ROBERT SAVIGNAC, Sharnbrook, Bedfordshire.

1866 STEELE, ARTHUR BROWNE, Lecturer on Midwifery, Royal Infirmary School of Medicine; 62, Mount pleasant, Liverpool.

1859 STONE, JOSEPH, M.D., 84, Bloomsbury, Oxford street, Manchester.

Elected

1860 STONE, THOMAS, F.R.C.S., Resident Surgeon to Christ's Hospital.

1859 STOWERS, NOWELL, 125, Kennington park road, Kennington, S.

1866 STRANGE, WILLIAM HEATH, M.D., 4, The Avenue, Belsize park, Hampstead, N.W.

1859 STUTTER, FREDERICK AUGUSTUS, M.D., Farnboro' House, Upper Sydenham, Kent.

1862 SUTHERLAND, WILLIAM, M.D., 22, George street, Croydon, Surrey.

1862 SUTTON, FIELD FLOWERS, M.D., Balham hill, Clapham, S.

1859 SWAYNE, JOSEPH GRIFFITHS, M.D., Physician-Accoucheur to the Bristol General Hospital; Harewood House, Pembroke road, Clifton, Bristol. *Council,* 1860-61. *Vice-Pres.* 1862-64. *Hon. Loc. Sec.*

1860 SWEETING, GEORGE BACON, M.R.C.P., King's Lynn, Norfolk.

1859 SYMONDS, FREDERICK, F.R.C.S., Surgeon to the Radcliffe Infirmary; 35, Beaumont street, Oxford. *Council,* 1862-65. *Hon. Loc. Sec.*

1866 TANNAHILL, ROBERT DUNLOP, M.D., Consulting Physician to the Lying-in Hospital; 106, Bath street, Glasgow.

1859 TANNER, THOS. HAWKES, M.D., F.L.S., 9, Henrietta street, Cavendish square, W. *Hon. Sec.* 1859-62. *Vice-Pres.* 1863-65.

1866 TANNER, MARK BATT, M.D., Adelaide Lodge, Cliftonville, Brighton.

1859 TAPSON, ALFRED JOSEPH, M.B. Lond., 35, Gloucester gardens, Westbourne terrace, W. *Council,* 1862-64.

1863 TAPSON, JOSEPH ALFRED, Surgeon to the Clapham General Dispensary; 83, High street, Clapham, S.

1862 TASKER, RICHARD THOMAS, Melbourne, near Derby.

1859 TAYLOE, EDWARD, South Lodge, Clapham common, S.

1859 TAYLOR, CHARLES, M.D., Camberwell green, S.

1859 TAYLOR, DAVID, 180, Kennington park road, S.

1862 TAYLOR, THOMAS, F.R.C.S., 19, Bennett's hill, Birmingham.

1862 THANE, GEORGE DANCER, M.D., 15, Montague street, Russell square, W.C.

1866 THOMAS, JABEZ, L.R.C.P. Ed., Physician to the Swansea Infirmary; Northampton villa, Swansea, South Wales.

1866 THOMPSON, JOHN, M.D., Bideford, Devon.

Elected

1867 THOMPSON, JOSEPH, Jun., Surgeon to the Nottingham General Hospital; 1, Oxford street, Nottingham.

1867 THORBURN, JOHN, M.D., Lecturer on Midwifery, Manchester Royal School of Medicine; 333, Brighton place, Oxford street, Manchester.

1867 THORMAN, THOMAS, 17, Oxford terrace, Hyde park, W.

1860 THORNE, GEORGE LEWORTHY, M.D., Swanage, Dorset.

1862 THORNTON, WILLIAM HENRY, M.D., Springfield terrace, Dewsbury, Yorkshire.

1867 THORNTON, WILLIAM HENRY, Berkeley Lodge, Margate.

1866 THORP, DISNEY, London Hospital.

1860 TIFFEN, ROBERT, M.D., Wigton, Cumberland.

1866 TILLEY, SAMUEL, 70, Union road, Rotherhithe, S.E.

1859 TILT, EDWARD JOHN, M.D., Consulting Physician to the Farringdon General Dispensary; 60, Grosvenor street, W. *Council*, 1867-68.

1859 TIMES, HENRY G., 23, Manchester street, Manchester square, W.

1861 TOMLINSON, ROBERT SHERRATT, The Woodlands, Burton-on-Trent.

1860 TORBOCK, THOMAS REDDISH, M.D., 9, Skinnergate, Darlington.

1862 TRACY, RICHARD T., M.D., Physician to the Lying-in-Hospital, Melbourne, Victoria.

1865 TREND, HENRY GRISTOCK, L.R.C.P. Edinb., 191, Southgate road, Islington, N.

1860 TUKE, JAMES KINGDON, Surgeon-Accoucheur to the Brighton Lying-in Dispensary; 1, Devonshire place, Brighton.

1859 TULLOCH, JAMES STEWART, M.D., Surgeon to the Westbourne Dispensary; 1, Pembridge place, Bayswater, W.

1864 TURNBULL, M. W., M.D., Physician to the Lying-in-Hospital, Melbourne, Victoria [deceased].

1861 TURNER, RICHARD, Consulting Surgeon, Lewes Dispensary; High street, Lewes, Sussex.

1865 TURNER, JOHN SIDNEY, Surgeon to the Anerley Dispensary, Woodside, Anerley road, Upper Norwood, Surrey.

1863 TUTIN, JOHN HASLEDINE, Surgeon to the Ripon Dispensary, Westgate, Ripon, Yorkshire.

Elected

1851 TWEED, JOHN, JAMES, Jun., F.R.C.S., 14, Upper Brook street, W.

1860 VARENNE, EZEKIEL G., Kelvedon, Essex.

1860 VINCENT, PATRICK, Wells-next-Sea, Norfolk.

1862 VINE, GEORGE JOHN, M.D., 3, Henrietta street, Covent garden, W.C.

1866 VIPAN, WILLIAM HENRY, Uxbridge.

1864 WAHLTUCH, ADOLPHE, M.D., 242, Oxford terrace, Oxford street, Manchester.

1859 WAITS, JOSEPH, 6, Market place, Devonshire road, Bromley-by-Bow, E.

1860 WALES, THOMAS GARNEYS, Jun., Downham Market, Norfolk.

1863 WALKER, THOMAS HOUGHTON, M.D., Encombe House, 15, London street, Reading, Berks.

1866 WALKER, THOMAS JAMES, M.D., Surgeon to the General Infirmary, Peterborough; 18, Westgate, Peterborough.

1860 WALKER, WILLIAM HENRY, L.R.C.P. Ed., Aldborough, near Darlington, Yorkshire.

1860 WALLER, JOHN TURPIN, Flegg Burgh, Norfolk.

1867 WALTERS, JAMES HOPKINS, Richmond road, Kingston-on-Thames, Surrey.

1864 WALTON, BRINSLEY MARCIUS, L.K. Q.C.P. Ireland; Minchinhampton, Gloucestershire.

1859 WANE, DANIEL, M.D., 20, Grafton street, Bond street, W.

1860 WARD, JOHN, Penistone, Sheffield, Yorkshire,

1859 WARDEN, CHARLES, M.D., Hon. Surgeon to the Birmingham Lying-in Hospital; 39, Temple street, Birmingham.

1862 WATKINS, CHARLES STEWART, 11, Chandos street, Strand, W.C.

1867 WATSON, T. W. WASDALE, 28A, Howland street, Fitzroy square.

1867 WATTS, ARTHUR JOHN, L.R.C.P. Ed., 23, Westbourne park terrace, W.

1861 WATTS, GEORGE HENRY, Thatcham, near Newbury, Berks.

1867 WEBB, FRED. E., 247, Maida vale.

1859 WEBB, HENRY SPEAKMAN, Welwyn, Herts.

1859 WEBB, J. CRASKE, M.D., 14, Lower Belgrave street, S.W.

Elected

1860 WELCHMAN, CHARLES EDWARD ELLIOT, Bore street, Lichfield, Staffordshire.

1867 WELLER, GEORGE, 2, Fairfield villas, Bow road, E.

1859 WELLS, T. SPENCER, F.R.C.S., Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital for Women and Children; 3, Upper Grosvenor street, W. *Council*, 1859. *Vice-Pres.* 1868.

1859 WEST, ROBERT UVEDALE, M.D., Alford, Lincolnshire. *Council*, 1859. *Vice-Pres.* 1860-62.

1859 WESTMACOTT, JOHN GUISE, M.D., Medical Officer to the Paddington Provident Dispensary; 19, St. Mary's terrace, Paddington, W.

1860 WHEELER, DANIEL, Chelmsford, Essex.

1860 WHITE, FREDERICK GEORGE, L.R.C.P. Ed., Castle House, Chepstow, Monmouthshire.

1859 WHITEHEAD, JAMES, M.D., Physician to the Manchester Clinical Hospital; 87, Mosley street, Manchester. *Council*, 1859-61. *Vice-Pres.* 1868.

1865 WHITEHEAD, WALTER, F.R.C.S. Ed., 234, Oxford road, Manchester.

1864 WHITMARSH, WILLIAM MICHAEL, M.D., Surgeon to the Hounslow Lying-in Charity; Thanet House, Hounslow, Middlesex.

1867 WILBE, RICHARD HAYDOCK, M.D., 24, Queen's road, St. John's Wood, N.W.

1866 WILKINS, JOHN, M.B. Lond., Williams' Town, Victoria.

1861 WILLIAMS, ARTHUR WYNN, M.D., Physician to the Samaritan Free Hospital; Physician-Accoucheur to the Western General Dispensary; 1, Montagu square, W.

1861 WILLIAMS, DAVID JOHN, M.D., Queenscliff, Geelong, Victoria, Australia. *Hon. Loc. Sec.*

1864 WILLIAMS, EDWARD, M.D., Holt-street House, Wrexham.

1867 WILLIAMS, EVAN, Bryngwrau, near Holyhead, North Wales.

1867 WILLIAMS, HENRY LLEWELLYN, M.D., 9, Leonard place, Kensington, W.

1860 WILLIAMS, ROBERT HANKINSON, L.R.C.P. Ed., Great Eccleston, near Garstang, Lancashire.

1867 WILLOUGHBY, EDWARD F., 8, Oakland villas, Redland, Bristol.

Elected

1860 WILLS, JOHN, M.D., St. Helier's, Jersey.

1859 WILSON, JAMES GEORGE, M.D., Professor of Midwifery in the Andersonian University, Glasgow; Physician Accoucheur to the Glasgow Lying-in Hospital and Dispensary; Clarence place, Sauchiehall street, Glasgow. *Council*, 1863–64. *Vice-Pres.* 1865–67.

1860 WILSON, ROBERT JAMES, L.R.C.P. Ed., 24, Grand Parade, St. Leonard's-on-Sea, Sussex. *Hon. Loc. Sec.*

1865 WILSON, THOMAS, L.R.C.P. Ed. (exam.), Alton, Hants.

1868 WILTON, JOHN, L.R.C.P. Ed., Chalk Pit House, Sutton, Surrey.

1866 WILTSHIRE, ALFRED, M.D., 19, Queen Anne street, Cavendish square, W.

1866 WINTERBOTTOM, HENRY, Consulting Surgeon to St. Mary's Hospital, Manchester; 56, Bury New road, Strangeways, Manchester.

1860 WISEMAN, WILLIAM WOOD, Springstone House, Ossett, near Wakefield, Yorkshire.

1860 WOOD, WILLIAM JAMES, Brightwaltham, Wantage, Berks.

1864 WOODMAN, WILLIAM BATHURST, M.D., Stonehouse, Gloucestershire, and the London Hospital.

1859 WORSHIP, J. LUCAS, Riverhead, Sevenoaks, Kent.

1866 YEAMAN, GEORGE, M.D., 91, Sauchiehall street, Glasgow.

1866 YELD, HENRY JOHN, M.D., Surgeon to the Sunderland Lying-in Charity; 19, Bridge street, Sunderland.

1867 YOUNG, EDWARD PARKER, Surgeon to the Westbourne Dispensary; 10, Delamere Crescent, Upper Westbourne terrace, W.

1861 YOUNG, WILLIAM BUTLER, 5, Castle street, Reading, Berks.

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ADVERTISEMENT.

The Society is not as a body responsible for the facts and opinions which are advanced in the following papers and communications read, or for those contained in the abstracts of the discussions which have occurred, at the meetings during the Session.

OBSTETRICAL SOCIETY

OF

LONDON.

SESSION 1867.

ANNUAL GENERAL MEETING, JANUARY 2ND, 1867.

Dr. ROBERT BARNES, President, in the Chair.

Present—36 Fellows and 7 visitors.

Dr. Heath Strange was admitted a Fellow of the Society.

The following gentlemen were elected Fellows:—Dr. F. Shepherd, Messrs. F. M. Corner, T. Thorman, George Weller.

A CASE OF FRACTURE OF THE PELVIS, WITH INJURY TO THE UTERUS, IN THE SIXTH MONTH OF PREGNANCY; RECOVERY; DEATH OCCURRING AT A SUBSEQUENT DELIVERY.

By THOMAS FAIRBANK, M.D. Lond.

In the early part of 1863 I was called to an Irishwoman, æt. 25, who, I was informed, had been severely crushed about the hips and the lower part of the abdomen, she being at the time in the sixth month of pregnancy.

She had been standing on a narrow bridge which crosses the river Don, at a time when a crowd had collected to witness the passage of a large dray bearing an iron fly-wheel

weighing twenty tons. The fly-wheel, which overlapped the dray, left very little space on either side between it and the parapet of the bridge, unfortunately it did not keep the centre of the road, but was drawn nearer to one side. The unfortunate patient was thus crushed between the edge of the wheel and the parapet, her pelvis and the lower part of the abdomen being compressed, according to the evidence of several witnesses, within a space of two inches in the antero-posterior direction. She had, at the moment of the accident, a gush of blood from the vagina, which, combined with the pain and fright, caused her to faint. She was immediately carried to her home, which was close at hand, where I found her about ten minutes afterwards, on some straw, covered only with a few rags, lying on her left side, with her right hand stretched out against the wall to support her body a little. Her face was very pale and anxious; lips tightly compressed, as if to prevent any great expression of pain; nevertheless she groaned frequently. Her pulse was slow and scarcely perceptible at the wrist, and occasional rigors occurred. The surface of the body was cold, and she complained of being chilly, but principally of an intense pain about her hips and at the lower part of the abdomen, where, about two inches above the symphysis pubis, was seen a transverse bluish mark, about three inches in length and one in width. The abdomen was of the size and shape of the sixth or seventh month of pregnancy, and was exceedingly tender in the hypogastric region. She said it was not smaller than it had been previous to the accident. She stated that at the moment of compression, when the gush of blood came from the vagina, she felt the child give a "turn over," since which she had not felt any movement of it. On careful auscultation, no fœtal heart-sounds were audible; but the placental souffle was apparently normal, and could be heard distinctly in the right hypogastric region. The right iliac bone was easily movable, and appeared to be separated from the sacrum behind; in front, as nearly as I could ascertain, about midway between the symphysis pubis and anterior

superior spine of the ilium, there was a fracture through the horizontal ramus of the pubes, which appeared to extend also across the obturator foramen through the ascending portion of the ischium, or the descending ramus of the pubes; and the line of fracture was felt or indicated by pain on pressure in the vagina; but the pain caused by examination was so extreme that it was only made cursorily. The uterus appeared normal for the sixth month of pregnancy, and the child's head could be easily distinguished. The os uteri admitted the end of the finger, but the plug of pregnancy still remained firm. The patient appeared to have given up all hopes of living, and begged earnestly for the priest. As she still complained of faintness, I gave her a little brandy, and from the relieving officer of the parish and some kind ladies in the neighbourhood I obtained some pillows and bedding, &c., with which I made the poor woman as comfortable as was possible, and after giving her Tr. Opii ʒss, left her. This was about 3 p.m.

At 5 p.m. her condition was not much altered: pulse a little fuller; complains of thirst.

7 p.m.—Beginning to be restless and flushed; pulse fuller and more rapid; no further discharge from the vagina; has felt no movements of the child.

11 p.m.—Very restless, and at times delirious; feels hot; countenance very anxious; cheeks flushed; pulse 100, small and rather wiry. Complains of very great pain and tenderness over the whole abdomen; has passed urine, which appears normal. Ordered Tr. Opii ♏xx.

Second day, 8 a.m.—Had passed a restless night, with occasional delirium; countenance exceedingly anxious; cheeks flushed; pulse 112, wiry; tongue very tremulous, and furred on dorsum; abdomen tense and very tender; has vomited twice in the night; urine passes naturally; has felt nothing of the child, and no fœtal sounds are to be heard on auscultation; is tired of lying on her left side, and so we carefully turned her on her back, and then propped her hips with small pillows. Ordered Calomel gr. ij, Pulv. Opii gr. j, 4tis horis.

3 p.m.—Has vomited several times greenish bilious fluid; countenance very anxious; knees drawn up; pulse very rapid and wiry; abdomen very tender and tense, the blue marks on the lower part more plainly visible. Ordered turpentine cloths, with hot flannels over them, to be applied to the abdomen; to take soda-water, milk, and a little brandy; mixture of Liq. Opii Sed., Eth. Chlor., and Ac. Hydrocyan. dil.

10 p.m.—Is very restless and flushed, and unless her attention is firmly fixed she wanders continually; cries out frequently with the pain; pulse 110, but softer; vomiting still continues.

Third day.—Has had a very restless night; appears more feeble; moans incessantly; cheeks look pinched; tongue brown and very tremulous; pulse much softer than yesterday, 116; tenderness rather less; continues to vomit, and can keep nothing down even for a few moments. Towards evening she became worse; pulse more rapid and feeble; moaning incessantly. When I left her, I thought she could not possibly survive the night. To continue the medicine and pills.

Fourth day.—The febrile symptoms are much abated, and she is reported to have had two or three hours of sound, quiet sleep; countenance much less anxious, and she says she is in less pain; vomits much less frequently; pulse 100, easily compressible; urine passes naturally; bowels moved once to-day.

From this time she continued to improve. The febrile symptoms and extreme abdominal tenderness abated, and as soon as she could bear pressure on the hypogastric region, at the suggestion of Dr. Stone, late of Masborough, who had given me his kind assistance and advice in the case, a broad, strong, well-padded belt was made to surround the hips: this, when applied, gave her great relief. The abdomen soon began to diminish in size; her breasts became flaccid; no fœtal sounds could be heard, and both the woman and myself felt sure the child was dead.

At the end of two months, she was able to walk about

the room a little with the assistance of a stick, and her general health was good. At this time two or three medical men advised me to induce labour; but I thought that as the patient was in such good health, and appeared to be taking no harm from the retention of the fœtus, I would let her alone; and, moreover, I felt certain that some great injury had been done to the uterus, which might even then be not thoroughly repaired.

She now began to get up and down stairs, and resume her ordinary duties; but the *right iliac* bone remained about one inch higher than the *left*, and the right side of the pelvis much flatter than the left.

About three months after the accident, I was called to her about seven o'clock in the morning, and found a fœtus in its membranes protruding from the vagina; these I carefully removed, and by means of the funis extracted a small, hard placenta. The uterus contracted feebly, and some oozing of blood continued for some hours afterwards, so much so as to cause her to faint, but it stopped on the administration of two or three doses of Liq. Ergotæ. She said she had only felt two or three slight pains before the fœtus was expelled. She progressed favorably, and within two months afterwards was able to walk one mile and a half up hill and back again.

The fœtus was of between five and six months, very much wrinkled from the long maceration, but presented no marks of injury. The placenta was very firm and consolidated. I told the patient expressly that if she became pregnant again, she must inform me of it as soon as possible; or, if I had left the town, Mr. Walker, of Masborough, or Dr. Hardwicke, of Rotherham. I soon after left that part of the country, but have since heard that about twelve months after my departure she was taken in labour at the full term, had a midwife to attend her, and that not until thirty-six hours had elapsed was medical assistance called in. Dr. Hardwicke was not at home; but his assistant, who knew nothing of her pelvis having been fractured, went, and found her very faint and exhausted. He, however, applied

the forceps, and after some time with difficulty delivered her of a still-born child. The patient, however, did not rally, and died within an hour afterwards.

I have not been able to find any record of a similar case in the books which I have consulted on the subject. It shows the great power of the "vis medicatrix naturæ." I cannot doubt but that either rupture or very severe contusion of the uterus had occurred, and that general peritonitis followed, which nearly killed the patient. It is remarkable also that the fœtus should have been retained in utero till about the full term of utero-gestation, and that no constitutional disturbance should have arisen from the presence of a dead ovum for so long a time. The hardness and firmness of the placenta was due to the closing of the vessels, and, no doubt, partly to effusion from inflammation induced by the injury.

ON CRIMINAL ABORTION.

By John Shortt, M.D., F.L.S., M.R.C.P.L.,

GENERAL SUPERINTENDENT OF VACCINATION, MADRAS PRESIDENCY, AND LATE ZILLAH SURGEON OF CHINGLEPUT.

This detestable crime prevails to an almost incredible extent in India. It is no less common among the semi-civilised classes of Hindoos who live in the very midst of Europeans in the Presidential and other large British towns, than it is amongst the wild and barbarous tribes inhabiting the jungles in all parts of this extensive peninsula. In the former case, the inequality of ages in marriage, and the perpetual widowhood that is prematurely entailed thereby on a large proportion of their females, is perhaps the most frequent incentive to the perpetration of this crime; while the proverbial frailty of the sex, extreme laxity of morals, and indelicate conversation that is universally indulged in

amongst Hindoo families, render it difficult, if not impossible, for these unfortunate members of society to preserve their chastity. Disfigured as the widow may be by shaven head and deprivation of ornaments, and treated no better than a household slave, youth under all circumstances possesses charms and attractions which are often the cause of her seduction, not unfrequently followed by criminal abortion, to hide the victim's shame and save her family from dishonour, who otherwise may preserve themselves from disgrace at the cost of her life.

Among many half-savage tribes criminal abortion is practised under a different aspect, being regarded as one of the religious institutions of the province. This may be seen among the Khonds and other savage tribes of Orissa and northern parts of India, where infanticide and human sacrifice are openly carried on as necessary to the welfare of the deluded people, and for the success of their agricultural operations; and among such nations these degrading practices are encouraged by their priests or other leading men, who for their own base purposes denounce the vengeance of the Deity if he is not propitiated by these inhuman and bloody rites. Even in those parts of India where British influence is acknowledged, infanticide still prevails among the rude wild tribes; while in parts where the ignorant and superstitious inhabitants from want of facilities of communication are excluded from intercourse with the more enlightened of their countrymen, and who see nothing of the refined morals of their rulers, it is to be feared that in such places this crime, is frightfully common.

To prove to the Society that I am not imaginative in these assertions, I have only to state that during the year 1863, in the Madras district alone, under the head "Causing miscarriage, abandonment of children, concealing birth, &c.," in the police returns there are entered 22 cases, with 27 individuals convicted of one or other of these crimes. From these figures it may reasonably be supposed that this forms but a small portion of the list of actual occurrences; for, surrounded as the natives of India are with

caste prejudices, it is not easy to discover crimes of this nature, and still more difficult to convict the parties when detected; and hence there is reason to suppose that at least an equal number, if not more, escape the punishment they merit. Women have been frequently brought to me for examination who bore unmistakable signs of recent delivery; but from the non-production of the fœtal body, they escaped conviction at the sessions court.

It is amusing to hear the conflicting statements and the readiness with which these native females (when convicted and sentenced) confess the crime and detail the modes resorted to by them to effect criminal abortion. In an article on Fœticide, published in the third volume of the 'Madras Quarterly Journal of Medical Science,' page 262, I gave some instances: since then several other cases have come before me in my capacity of Zillah or District Surgeon.

In February, 1864, a Brahmin widow died suddenly at Conjeveram. Intimation of the fact having reached the police, a court of inquest was held, when the friends of the woman asserted that she had died of dropsy; but the apothecary attached to the dispensary, suspecting how matters stood from the protuberance of the abdomen and sundry stains of blood that existed on the cloth wrapped round the corpse, insisted on a post-mortem inspection, which was carried out notwithstanding the most strenuous objections from the family and friends, and the result was the discovery and removal of a seven months' fœtus. Unfortunately for the ends of justice, no evidence was forthcoming to implicate any one concerned. Her friends now gave out that the deceased had committed suicide, and the autopsy was not sufficiently searching to pronounce whether the cause of death was poison, or from the effects of attempted criminal abortion. The parties concerned complained bitterly of the violation of their caste prejudices, and the disgrace to their family that the post-mortem examination had subjected them to. Such cases are of frequent occurrence in native towns.

I shall now give a brief description of the signs that were

more commonly observed in cases brought to me for medical inspection, and the means that had been employed in effectuating this iniquitous practice. In the cases which came before me, I found that up to a fortnight or a little later, the symptoms of recent delivery were well indicated by the relaxed condition of the vulva and passages, patulousness of the os uteri, and in the early stage the presence of the lochial secretion, and of a white mucous secretion in later cases, with that characteristic acid smell common to women in the puerperal state. The distension of the breasts, flow of milk on pressure, or the fulness and slight knotty feeling in them for a short time after, are also observable; while the general anæmic appearance and sunken eyes will be noticed by the observant physician, notwithstanding the darkness of complexion of the patient. There was also that peculiar excitement of the pulse, with dryness of skin, invariably present in such cases. In multiparous women, the womb was found more patulous, resembling a loose, flabby bag, and the neck was not discernible; but in primapara, the os, although patulous to a small extent, still had the neck protuberant.

Very recently a case was sent to me for examination. The woman was accused of the crime of criminal abortion. I found the usual symptoms were present; but the woman declared that no abortion had taken place, although she admitted that she had been five months pregnant. This statement was altogether novel in my experience, the usual story in such cases being that the occurrence was accidental—the result of fright, fatigue, or a fall perhaps—and followed subsequently by a full confession of the crime. In the case under notice the woman was acquitted, as the fœtus was not forthcoming.

The means which I have found most commonly resorted to for producing criminal abortion are the following:—the juice of the fresh leaves of the bamboo plant, the milky sap of the various species of Euphorbia and Asclepiads, and that of the tribe of Plumbaginacæa.

1. The green leaves of the bamboo (*Bambusa arundiceæ*)

are said to be a powerful uterine stimulant. They are gathered fresh, and bruised in a stone mortar; the juice is then expressed, which is taken in doses of a tablespoonful three times a day. It is said it will produce its effects in the course of two or three days. I have seen it successfully employed in amenorrhœa.

2. The juice of the milk-hedge, or *Euphorbia tirucalli*, is considered by the natives a most powerful medicine in expelling the contents of the uterus when applied locally. The milky juice that flows from the plant is collected; a piece of rag is saturated with it and tied on to the end of a small stick, and applied to the os uteri, and kept there till the desired effect is produced, which generally happens in the course of from twelve to twenty-four hours. From its violent acrid and irritant property, inflammation of the part often sets in, and the patient is put to much torture. The milky sap of the *Euphorbia tortilis*, *Euphorbia antiquorum*, and *Calatropis gigantea*, are used in the same manner. Assafœtida, in unison with several aromatics and spices, is in frequent use; but the most powerful and successful remedy employed is the *Plumbago Zeylanica*, or chittra-moolum, which possesses powerfully acrid and irritant properties. Its root bark is administered internally, and is also used topically. Internally it is given in doses of from ʒij to ʒiv, once or twice a day, beaten up into a bolus with water.

From the numerous cases that have come before me for examination, and from the statement of the patients themselves, the external application of any of the above acrid irritants seems the most successful means; and in most cases it is on the failure of internal remedies, and as a last resource, that external applications are resorted to; and it has frequently happened that, either from pain or neglect, the women do not remove the stick whereon the milky sap is applied to the uterus, which, acting as a foreign body, adds to and keeps up the irritation. The stick with the moistened rag have been more than once extracted from the uterus by myself and assistants some days after it had ex-

pelled its contents, to the great astonishment of the patient. The stick was found fixed in the uterine cavity in the form of the letter V, in which shape probably it was unable to escape. I have reason to believe that much violence and rude force are used in the introduction of irritant applications, more especially when the *Plumbago Zeylanica* is used, as the root-stem itself is sharpened and thrust into the uterus.

In February, 1864, the body of a native female was sent to me for examination, as she was suspected to have died from the effects of measures used to induce criminal abortion; and, on examination, the base of the uterus was found perforated in some three different places. Such injuries are of frequent occurrence, and even when the woman escapes with life she usually becomes a martyr to obstinate uterine disease.

The natives fully understand the enormity of the crime, and its punishment when detected; but their moral views on such subjects are so distorted that they prefer having recourse to criminal abortion, at the risk of their lives, to facing the disgrace of expulsion from caste. Since the above remarks were written, two cases were tried for the same crime. In one the accomplice, an old woman, stated that, as the prisoner complained of a pain in the abdomen, she gave her a croton purge, which, unintentionally on her part, produced abortion. This was possible; but the prisoner, a young widow, attributed it to the application of the root-stem of the chittramoolum, or *Plumbago Zeylanica*. Both were convicted. In the second case I did not hear the result, as I left the station before it was known.

From the published police reports for 1863 and 1864, under the head of "Causing miscarriage, &c.," for the whole of the Madras Presidency, I give the following table:

Table of Offences, Sec. 312—318, *Indian Penal Code, during the years* 1863 *and* 1864.

Offence.	No of Offences reported.	No. of Offenders concerned.	No. of Offenders apprehended.	No. convicted.	Discharged without trial.	No. acquitted.
1863.—Causing miscarriage, &c.	164	303	290	78	77	135
1864.—Causing miscarriage, &c.	142	198	150	41	42	67
Total	306	501	440	119	119	202

CASE OF PARAPLEGIA OCCURRING DURING PREGNANCY.

By Percy Boulton, M.D., &c.

The following notes of a case of paraplegia which is under my care I venture to think may be interesting, from the fact that such a man as Dr. Churchill has remarked that few cases of the kind are published, and that he has only been able to collect thirty-five after searching every known work on the subject.

Mrs. S—, a tall, stout, and arthritic-looking woman, called at my house early in May (last) to engage me to attend her in her confinement, which she expected to take place at the commencement of June. She then said that she was perfectly well, that she had had one previous confinement, and that the child was living and healthy. She stated that her age was 38 years.

On May the 17th her husband called on me and wished

me to see his wife, which I did on that day. I found that she had to a great extent lost the use of her limbs, being *quite* unable to stand or to grasp anything tightly, though when told to do so she could move her extremities pretty well. Sensibility was so much diminished that we could pinch or prick the limbs without causing pain, and although her power of speech was perfect, and she answered questions rationally, her memory was *entirely* gone. The tongue was not drawn to either side when protruded, and her features were natural. The bowels were very torpid, and the urine, though loaded with phosphates, contained NO albumen.

She has had no fit or fall, and said that these symptoms had gradually come on her during the previous fortnight, and though she had no pain in the head she slept very badly; she ate next to nothing, and was rapidly losing flesh. The knees were somewhat contracted, and any attempt to forcibly extend them caused great pain. The heart was large and fatty. The absence of all signs of irritation, such as convulsions, cramp, formication, œdema, &c. &c., together with the asthenic appearance of the patient, led me to consider it a case of white softening, in which the amount of blood in the brain and cord would be diminished, and as she was pregnant I thought quinine in two grain doses would be the most appropriate remedy—regulating the bowels by aperients.

At the end of the fortnight, as there was no improvement, I ventured to give her strychnia in $\frac{1}{16}$ grain doses.

On June 3rd, as Mrs. S— was still no better, I called in my friend Dr. Eastlake to see the case with me; he agreed entirely as to the nature of the case, and at our visit we heard the fœtal heart distinctly. We agreed that Mrs. S— was not in imminent danger, and therefore it was better to let matters rest, and that the induction of premature labour was unnecessary. We ordered her tincture of nux vomica with the compound decoction of aloes. This she took for some time with little benefit, the only change being occasional pain over the region of the kidneys, when the urine always became more loaded with phosphates. I

examined the urine many times but never could detect any albumen.

Mr. S— expressed a wish that Dr. Sieveking should see his wife, and so on the 11th of July we met for consultation, and after a most careful examination Dr. Sieveking gave as his opinion "that it was a bad case of softening of the brain and cord; that Mrs. S— would probably not live very long, and though he was not a physician-accoucheur his private opinion was that we had mistaken the maternal vessels for the fœtal heart, and that Mrs. S— was not pregnant at all." He ordered a sedative to be taken at bed-time, quinine to be given during the day, and a liniment to be rubbed over the knees.

On July 13th, at 6 a.m., just thirty-eight hours after my consultation with Dr. Sieveking, I delivered Mrs. S— of an eight months' female child (breech presenting) which had been probably dead two days, judging from the state of the cuticle and general decomposition. This might account for Dr. Sieveking being unable to hear the fœtal heart, and the abdominal tumour he believed was only the recti muscles imbedded in fat.

Mrs. S— got nicely over the confinement but did not improve in memory, for in less than a week she quite forgot that she had gone through it.

On July 27th she complained of intense pain over the sacrum, which I blistered. On the 29th she could extend her legs better, the pain over the sacrum was relieved, she had slept better, had eaten more, and was more cheerful, though she was unable to stand and her memory was as bad as ever. Since that, and up to the present time, she has remained about the same. She eats well, has regained much of her flesh, the bowels are moved regularly, the urine is clear, sp. gr. 1022, and contains no albumen; but in spite of strychnia, quinine, iron, ammonia, iodide of potassium, blisters, and fresh air on fine days in a Bath chair, her memory and ability to stand alone are gone.

I think there is no doubt that this is a case of ramollissement, due probably to fatty degeneration of the cerebral

arteries. Commencing as it did at about the sixth month of pregnancy it is possible that the extra demand on nutrition had some little influence in the case, though it might have occurred had Mrs. S— never been pregnant at all. I can find, however, no hereditary tendency to anything of the kind. I shall be glad to hear the opinions which may be expressed on the case by any of the members of this Society, for I fear that treatment will be of little avail, and the prognosis of the case must remain most unfavorable.

FŒTAL PERITONITIS

(In Utero).

By W. A. Hunt, Esq., King's College, London.

(Communicated by Dr. Murray.)

Post-mortem appearances of a male fœtus (twin); duration of extra uterine life one hour.

Nothing peculiar in the external appearances, except the size of the articular ends of the bones, especially the radius and ulna. Scrotum very œdematous.

Brain much congested so as to present the appearance of black currant jam and cream, but no softer than fœtal brains usually are. There was no tearing up or effusion, and it was firm enough for topographical examination. On opening the thorax its cavity was found almost entirely occupied by the thymus, and an enormously engorged heart, which pressed the lungs, flattening them against the ribs. The right lung was very slightly crepitant. On the surface of the heart the anterior coronary artery presented an unusual appearance for that of an infant; it was firm and yellow in parts, like the antheromatous artery of the adult.

The abdominal viscera presented the appearance of both chronic and recent peritonitis. On raising the intensely congested omentum, the equally congested intestines were painted over with recent lymph, and in parts constricted by tolerably firm threads, the result probably of some former attack.

The abdomen resembled that of some animal which had been injected with an irritating fluid a few hours before death, and also that of one which had survived an attack a considerable time previous to death—a curious circumstance in a fœtus.

The meconium could not escape, at least but very imperfectly, owing to these bands, which were stronger and tighter towards the end of the bowel.

Owing to the neglect of the dissecting-room porter the preparation was spoilt.

I was kindly assisted in the post-mortem by my friend Mr. Edwards, of Edinburgh.

No history or trace of syphilis in the mother, who is eighteen years of age. From the father's history it is possible that he may have had a chancre some years ago.

Annual Meeting.

The Report of the Auditors of the accounts of the Treasurer for the year ending December 31st, 1866, was read, from which it appeared that the balance in the hands of the Treasurer was £96 7*s.* 9*d.*, and that during the year the sum of £50 had been invested in the Funds in the names of the Trustees of the Society. The balance-sheet, read by the Secretary, showed that the Society had received during the year £580 2*s.* as subscriptions from Fellows, and £51 2*s.* 1*d.* as proceeds of the sale of the 'Transactions' of the Society.

Dr. Braxton Hicks, after congratulating the Society on its increasing prosperity, moved—

"That the report now read be received and adopted."

Dr. Playfair seconded the resolution, which was carried unanimously.

Dr. Hall Davis said he had great pleasure in moving the next resolution, because he felt confident that it would be warmly responded to by the Fellows of the Society. Amidst the steadily increasing prosperity and usefulness of the Obstetrical Society of London, he said, we must admit that our 'Transactions' have been greatly enriched by contributions of its Fellows during the last two years; and we must acknowledge that our retiring President has given us important aid in this respect. We have also to bear in mind that during his presidency the first Obstetrical Congress, so happily suggested and carried out, has, thanks to his wise direction, assisted by the ready and unwearied exertions of our Secretaries and other officers of our Society, been successfully inaugurated. And another result has been, that this, the eighth gestation of our Society, has, at its full maturity, terminated in the happy delivery of healthy twins, in the shape of two very interesting volumes. In vacating that chair, which he has filled so worthily, with such ability and kindliness, our President will, I am sure, carry with him into his honorable retirement from that position our best wishes for his health and happiness, with the hope that he may long continue to the Society the benefits of his good judgment and experience. With grateful acknowledgments to our retiring Secretary, Dr. Meadows, and to our retiring Treasurer, Dr. Graily Hewitt, I will conclude with the following resolution:—

"That the best thanks of the Society be and are hereby given to the President and officers of the Society for their services during the past year."

Dr. Routh seconded the resolution, which was carried unanimously.

Dr. Barnes and Dr. Meadows respectively returned thanks.

The List of Donations of volumes and specimens during the past year was read.

The report of the scrutineers was read, and the following gentlemen were elected Officers of the Society for the year 1867 :

Honorary President.—Sir Charles Locock, Bart., M.D.

President.—John Hall Davis, M.D., F.R.C.P.

Vice-Presidents.—F. S. Haden, Esq., A. Hall, M.D. (Brighton), Graily Hewitt, M.D., Braxton Hicks, M.D., F.R.S., W. O. Priestly, M.D., J. G. Wilson, M.D. (Glasgow).

Treasurer.—Alfred Meadows, M.D.

Honorary Secretaries.—Gustavus C. P. Murray, M.D., and Henry Gervis, M.D.

Honorary Librarian.—J. R. Traer, Esq.

Other Members of Council.—R. Barnes, M.D.; J. S. Corry, M.D. (Belfast) ; F. C. Cory, M.D.; J. L. Earle, M.D. (Birmingham) ; H. E. Eastlake, F.K. and Q.C.P. ; R. Greenhalgh, M.D. ; C. Holman, M.D., (Reigate) ; W. Leishman, M.D. (Glasgow) ; W. Playfair, M.D. ; T. Pollock, M.D. ; Tyler Smith, M.D. ; E. J. Tilt, M.D. ; T. Bryant, Esq. ; J. F. Mitchell, Esq. ; A. Napper, Esq. (Cranley) ; E. Newton, Esq. ; J. Oldham, Esq. (Brighton) ; and William Squire, Esq.

The President then delivered the following

ANNUAL ADDRESS.

My last duty as President is one of most unalloyed satis-tisfaction. I have to record the events of another year rich in scientific profit, pleasing by the memory of agreeable meetings and friendly associations, prosperous even beyond our own high standard of prosperity in all that makes a learned society thriving, solid, and useful. Against the 31 Fellows lost to us by death or resignation, we have to count 65 new Fellows elected during the year. We now number

536 Fellows and 25 Honorary Fellows—a greater number than we have ever mustered hitherto; but not, I am well persuaded, the greatest number we are destined to see. Besides this accession to our Ordinary Fellows, we have had the satisfaction of enrolling five new Honorary Fellows; namely, Professor Hugenberger of St. Petersburg, and Professor Lazarewitch of Charkoff, in Russia; Professor Rizzoli of Bologna, and Professor Lazzati of Milan, in Italy; and Professor Simon Thomas of Leyden, in Holland —men illustrious in their respective countries, and in the republic of science, which embraces all countries.

The losses we have sustained by death, although not light, are, happily, less considerable than those it was my duty to record last year. I regret that the scanty details which have reached me do not permit me to render due justice to the memory of those fellow labourers who have gone from amongst us.

Robert Hardey, of Hull, died at the age of sixty-three, on the 12th of May last. He had enjoyed a large practice at Hull, and had earned the universal esteem and confidence of his professional brethren. These distinctions — the highest and the most honorable that a medical practitioner can attain to—he owed to excellent personal qualities and rare professional accomplishments and skill. He was educated at the Borough hospitals; he was a Member of the Royal College of Surgeons, and a Licentiate of the Apothecaries' Society. He had held the offices of Superintendent of Quarantine of the river Humber, and Certifying Factory Surgeon at Hull; he had also been Lecturer on Obstetrics at the Hull and East Riding School of Medicine. He was the author of an essay on "Special Position and the Obstetric Binder in Impeded Parturition," published in the second volume of our 'Transactions.' This essay was remarkable for sagacity in observation, originality in deduction, and for useful applications to practice. I look upon it as one of the most valuable and most interesting of the many contributions to science which our Society has been the direct means of evoking from the experience of men who,

but for the opportunity thus afforded, might never have been induced to give them to the world. He had also contributed to our 'Transactions' a valuable "Case of Abnormal Gestation," in vol. ii, and a "Case of Acephalo-Cyclopean Monstrosity," in vol. iv. He had filled the offices of Member of the Council, Vice-President, and Honorary Local Secretary of our Society.

William John French, M.R.C.S. and L.S.A., died at the age of forty-five at Southsea, on the 3rd of June. He had been engaged in general practice in Wilton for twenty years. Through his zeal in the practice of obstetrics we had become acquainted. He studied at the late Queen Adelaides' Lying-in Hospital whilst I was house-surgeon there. He was indefatigable in his work. He attended an astonishing number of cases during the time he lived in the hospital, and was most industrious in preserving notes of his observations. I regret that, like too many other men, whilst treasuring up the records of his experience for his own instruction, his too modest estimate of their value deterred him from publishing them for the instruction of others.

John Mackintay, of Isleworth, was one of the original Fellows of our Society. He had served as surgeon in the the Hon. E. I. Co.'s service. He was cut off at the age of sixty-two on the 8th of July.

John Pudsey Welshman Sydenham, Licentiate of the Society of Apothecaries, practised at Islip in Oxfordshire. He died on the 26th of June.

Reginald Bayley Walters, of William Street, Regent's Park. He was M.R.C.S. and M.S.A. He was educated at Bartholomew's.

Edward Guest, F.R.C.S., died on the 4th of January, 1866, at the age of forty-nine. He practised in Halsey Street, Chelsea.

Andrew Sisson, M.R.C.S., died on January 4th, aged fifty-seven. He practised at Reigate.

Francis Bennett, F.R.C.S., of Gateshead, died on the 24th of September, at the age of fifty-nine. He was educated at Edinburgh and the Borough hospitals. He wrote

several useful memoirs on points of practice in medicine, He was Surgeon to the Gateshead Dispensary and Lying-in Charity, and was a Justice of the Peace.

William Quarrel, M.R.C.S., died at Torquay, on the 10th of February, at the early age of twenty-five.

Edward Williams Richard, M.R.C.S. and L.A.S., of Finchingfield, Essex. He was the author of several essays in general literature.

William Middleton, F.R.C.S., of Leamington, died July 4th, aged sixty-three.

Our finances are in a sound condition, as the Auditors' Report will show. Notwithstanding the extraordinary demand upon our resources made by the Exhibition and the Catalogue, we have managed to add £50 to our funded capital. We have now a sum representing £1012 19*s.* 6*d.* in the 3 per cents.; a position I think you will agree with me in regarding as eminently satisfactory. In previous years we have indeed invested more largely in the funds; but this year we have acted boldly upon that policy which I ventured to advocate when I had the honour of addressing you last year: we have put out our spare cash at scientific interest.

And we may, I think, congratulate ourselves upon being wiser and more fortunate than the commercial societies of limited liability, during the year of panic, which seeking solely pecuniary returns, and missing that found no compensating gains. We are secure against this danger. Knowledge cast abroad can hardly fail to fall upon good ground, and wheresoever it falls it springs up, not a hundredfold simply, but it goes on through all coming years sowing itself, ever multiplying, and ever enriching the soil that receives it. Who can calculate the increase destined to flow from our Exhibition of obstetrical instruments held in March? Beyond the immediate gratification derived from the gathering of so many associates in the pursuit of obstetric knowledge, beyond the direct personal enjoyment created by extending and cementing individual friendships, there abide for all who joined in that great gathering pleasing memories, and the

consciousness of added scientific strength enhancing the interest that binds us to our vocation, and making us more useful to our fellow creatures. And still beyond that there is the increase of prestige and influence gained to our Society by the greatly extended communications with our fellow workmen abroad. For the first time in the history of medicine an opportunity has been given for the display, side by side, of all the instruments and other mechanical appliances which our predecessors and contemporaries, at home and abroad, have contrived for the help of suffering woman.

Upwards of 600 visitors attended the opening of the Exhibition at the Conversazione, held at the College of Physicians on the 28th of March. Many others took the opportunity afforded of examining the collection during the subsequent days upon which it was open either at the College or at the rooms of the Medical Society of London. Professors Hugenberger and Lazarewitch came expressly from Russia; Professor Martin and his son, Dr. Carl Martin, came from Berlin. From all parts of the United Kingdom visitors came; and at the banquet held on the following day, to receive our foreign guests, a large number of Fellows and distinguished visitors took part; we shall all, I think, retain a pleasant remembrance of the cordiality that prevailed throughout our great Obstetric Congress. From every side we received hearty sympathy and aid, and our thanks were especially deserved by the revered President and the Fellows of the College of Physicians, for the generous spirit in which they placed their magnificent building at our service.

It is not my intention to enter upon any minute description of our Exhibition of obstetrical instruments. The best and only adequate description that can be drawn is presented in the Illustrated Catalogue, of which each Fellow will receive a copy, and which will, I believe, long hold a conspicuous place in obstetric and medical literature, for the originality of its character and the richness of its matter. It preserves, or will call to mind, most of the characteristic features of

the Exhibition. Amongst the most interesting of these are the copious illustrations of the history of obstetric medicine, showing how the present forms of instruments have been developed out of the first conceptions. In this manner the progress of obstetric practice in different ages is exhibited step by step in the instruments, which are the actual symbols, often more striking and intelligible than written works, of the minds of the authors. Another remarkable feature is, the bringing under one glance the separate instruments and the sets of instruments used at the present time by different practitioners in different countries. Nothing could be more curious or more interesting than this picture of what I may call comparative midwifery. Parturition cannot differ so widely in different races or different countries. Why, then, should the means of aiding parturition be so varied? The answer must be, partly at least, in the traditional influence of different teachers and schools, which, starting from different points of departure and seeing things from different aspects, have guided their disciples along particular roads. It is a singular illustration of the unity of truth, and of her power to guide aright those who seek her in an honest spirit, that these roads should all lead to the same goal, the alleviation of human suffering. This comparison of the means adopted by different persons to attain the same end, will tend—has already tended—powerfully to dispel the prejudices with which each school clings to its favorite doctrines, and to make each seek in the rest materials for self-improvement. I am firmly persuaded that this Exhibition has tended more powerfully than any amount of literature could do to diffuse a more just mutual appreciation of our knowledge and practice; and that it is still pregnant with beneficial results, which will become manifest in the improvement of obstetric practice at home and abroad. A book speaks only one language, an instrument speaks an universal language, and needs no translation. An example has been given, which will, probably, be followed by our more purely surgical brethren.

Now, a few observations upon the work before us. It is

true, material enough, and more than enough, to fill up the ordinary meetings of the Society has never been wanting. But it has always been felt that a great Society like ours, possessing members in every part of the kingdom and its most distant colonies, is expected to do something more than merely to hold monthly meetings for the reading and discussion of memoirs contributed by individual members. We ought to turn to account the great organisation we possess; to enlist the active services of all our associates in such scientific works as require the combined efforts of many observers dispersed over varied fields of observation.

We have already achieved something in this way. The magnificent success of our exhibition was greatly due to the zealous co-operation of our whole body. I have now to submit to you another project. Dr. Farr, of the Registrar-General's Department, whose labours in illustration of vital statistics are so well known, and whose practical sagacity is always directed to the end of making the facts accumulated in his office subservient to the lessening of human suffering, has invited us to aid in collecting information as to the various modes of treating the new-born infant in various countries.

Dr. Farr's object in this investigation—and it is one directly contemplated in the foundation of our Society—is to diminish the actual heavy mortality amongst infants. A well-directed effort to accomplish this end must, he observes, be based upon extensive and accurate information as to the main causes of the excessive mortality, and as to the various modes of managing infants at the earliest periods of life. In this latter respect, the most singular diversities exist, not alone in different countries, but even in different parts of our own country. Possibly some of these diversities may be accounted for, and may be reasonably justified, by diversities of race, of climate, and of other special conditions. Still there must be, independent of all these diversities, some universal laws of physiology which apply to all races and to all places, and which are often disregarded out of heedless submission to inherited customs. To show how

far these departures from natural laws are the causes of infant mortality, and to establish sounder methods of managing new-born infants, is the task proposed. It is an honorable and useful task, in the prosecution of which our resources and organisation may be most effectually engaged. I think it will be felt by us all that it is no insignificant acknowledgment of the position we have attained amongst the institutions of the country, that our aid should be sought in a work of such great national and human interest. The Council have resolved to undertake this investigation; and communications will no doubt be sent to every Fellow, inviting the co-operation of all.

One of those points which are peculiarly fitted for investigation by the machinery of a large Society, is the influence of epidemics upon parturition. Since our foundation, two opportunities have occurred of making observations in illustration of this question upon a large scale. In 1863, we had an epidemic of smallpox; and, during the year that has just run its course, we have had an epidemic of cholera. Now there are several interesting questions arising out of the reciprocal influence of pregnancy and epidemic diseases, which are as yet far from being solved. What is the influence of smallpox, cholera, scarlatina, typhoid, typhus, and relapsing fevers, upon the course of pregnancy, as in causing abortion, premature labour, the death of the embryo? What is the influence of these diseases upon the course of labour, upon women in the puerperal state? What is the susceptibility of pregnant or puerperal women to be attacked? What is the influence upon new-born children? In what manner—that is, by what agency upon the blood or the nervous system—do these zymotic diseases act? What is the resultant mortality? These and other cognate questions might receive important elucidation, if we could collect from all our Fellows the histories of any cases of pregnancy and labour complicated with zymotic disease which have come under their observation.

There is one question touching the scope of the functions of a learned society, upon which I desire to offer a few

words. It has often been suggested that a scientific society might usefully guide professional and public opinion by expressing a collective judgment upon controverted points in theory or practice. The temptation to put forth decisions of this kind is sometimes great. But it is certain that such decisions can rarely be pronounced without danger of lending authority to error. It is, in the first place, extremely difficult to isolate a scientific question in medicine from its natural or artificial complications, to reduce it to the terms of a definite proposition that can be submitted to the suffrages of a body of men. In the next place, we have to remember that medicine is a progressive science. The doctrine of to-day is not the doctrine of yesterday; and to-morrow it is still less likely to be dominant. Yet we are all of us, more or less, under the thraldom of present doctrines. To commit ourselves to an absolute decision, must lead to one or two evils—possibly to more. We either subject ourselves to the contumely of seeing our judgment reversed when appeal is made to a more advanced tribunal; or, to the extent of our authority, we discourage and retard the re-examination of the question; and by so doing, of course, we discourage the spirit of original research.

Recognising, therefore, the imperative law that medical knowledge can never be perfect, howsoever closely it may, on any given point, approach perfection, it is wiser to abandon the attempt than to pronounce absolute and definitive judgments. The last word upon any medical topic will not be uttered in our time. But wise and just as this reasoning may be with regard to questions of medical doctrine and even of medical fact—for abundant experience shows that it is scarcely less difficult to determine a medical fact than a medical doctrine—it does not apply with equal force to the exercise of the function of deciding upon questions of ethics bearing upon the relations of medical practitioners to each other and to the public. Medical ethics form but a branch, or rather an application, of those immutable laws of justice which have held wholesome sway over mankind in all ages. It is to maintain respect for

these laws that all associations of men designed for good purposes have been made. A medical society would but ill fulfil its duty if it shrank from upholding in their integrity those rules of honorable conduct, by the scrupulous observance of which we can alone deserve and acquire the confidence of the world. I would therefore not venture to dictate limits to any man's researches, if conducted in an honest spirit; but I should not hesitate to denounce any flagrant departure from the rules of professional morality.

But I feel that I must not trespass with further reflections upon that indulgence which I fear I have sometimes abused. I now resign the chair to my successor and friend, Dr. Hall Davis. In his hands our commonwealth will receive no detriment. In retiring, a deep feeling of gratitude impels me to acknowledge, that whatever success may have attended my presidency is largely due to the generous confidence and ungrudging co-operation of the Council, and especially of our admirable Secretaries, and to the kindly support or forbearance of every member of the Society.

A vote of thanks to the President for his valuable Address was proposed by Dr. Tilt, seconded, and carried by acclamation.

FEBRUARY 6TH, 1867.

Dr. JOHN HALL DAVIS, President, in the chair.

Present—52 Fellows and 10 visitors.

The following gentlemen were elected Fellows of the Society:—Dr. T. E. Charles; Dr. E. Fairland; Dr. John Thorburn; Messrs. Henry May; John Parks; F. E. Webb; C. E. Squarey.

Dr. A. Maltei, Dr. C. Lovegrove, Dr. Frederick Shepherd, were admitted Fellows of the Society.

Dr. ROUTH showed (for the manager of Liebig's Concentrated Milk Company) two samples of Liebig's food for infants, the one being intended for children under three months of age, and the other, and thicker, for those above that age, and for invalids.

Dr. MATTHEWS showed a new craniotomy forceps, intended to give the grasping portion of the blades as much of a parallel, and as little of a centric motion as possible, thus avoiding, to a certain extent, the danger of splintering the bones.

Dr. CLEVELAND exhibited the body of an infant of what appeared to be doubtful sex. The clitoris was very much enlarged, and below it was a very small opening, constituting what appeared to be the vagina. No urethra could be found. The rectum appeared to be without a sphincter, and the cœcyx to be turned the wrong way. As no dissection of the parts had been made, Dr. Cleveland and Dr. Braxton Hicks were appointed to examine the case and report.

Dr. Murray exhibited a specimen of extensive ulceration of the os, with allongement of the cervix uteri, which he had removed by means of the single wire écraseur. He had tried the ether spray during the operation, but finding it did not arrest all pain, chloroform was administered, and the operation completed under its influence. Dr. Murray strongly recommended the use of the single wire, which he now uses in preference to the chain écraseur.

PRESIDENT'S ADDRESS.

Gentlemen,—My first impulse on taking the chair this evening is the grateful one of returning to you my heartfelt thanks for the honour which you have been pleased to confer upon me in raising me to the distinguished office of President of the Obstetrical Society of London.

But, gentlemen, whilst most fully appreciating that mark of your high favour, I must at the same time confess to a deep sense of the responsibility accompanying the trust, which you have confided to my care, and of the great need I shall consequently have for your indulgence and consideration.

Keeping these responsibilities constantly in view, it will be my aim and earnest endeavour, with your co-operation and that of the Council, to preserve to the Society that practical usefulness and that reputation which it has attained to, under those esteemed presidents who have heretofore directed its proceedings.

In common with you all, I feel assured, gentlemen, that I cannot fail to gather most valuable information from a continuance of that supply of clinical experience which has been so zealously contributed by the Fellows of this Society. And I ask of you, gentlemen, in proportion to your several opportunities of observation, a continuance of those efforts which have already been so fruitful in their results.

I also shall feel it to be a part of my duty and privilege to

Dr Westmacott dirext

W West Ch

[illegible]

interest which I may be [illegible]
department of medicine, [illegible]
excused for rem[illegible]
which has an hereditary claim upon me.

But not to dwell longer on the threshold of my [illegible]

to the more immediate [illegible]
this evening.

A CURIOUS MONSTER [illegible] FOR SOME [illegible]

By W. Ross, M.D., M[illegible]

(Communicated by the H[illegible])

The monster shown in the [illegible]
teen [illegible]
The [illegible]

Owing [illegible]
was [illegible]
parietal and [illegible]
a very small amount of [illegible]
by the membranous expansion [illegible]
there was evidence of effusion [illegible]
pouches, (A, figs. 1, 2) presenting [illegible]

The lower jaw and os frontis [illegible]
ears well developed, and the [illegible]
There was, however, no roof to the [illegible]

The eyes curiously [illegible]
The humours of [illegible]
external to the [illegible]
threatened to sl[illegible] shape and colour of
a carbuncle. T[illegible] through the fossa to

lend a helping hand in furthering the great end and object of our Society, the advancement of obstetrical science, and the improvement of its practice. Besides, gentlemen, the ordinary interest which I may be supposed to feel in that important department of medicine, I hope on this evening I may be excused for remembering the fact that it is, moreover, one which has an hereditary claim upon me.

But not to dwell longer on the threshold of my duties, I will now conclude this brief address, and invite your attention to the more immediate business awaiting our consideration this evening.

A CURIOUS MONSTER WHICH LIVED FOR SOME TIME AFTER BIRTH.

By W. Ross, M.D., M.R.C.S. Eng.

(Communicated by the Honorary Secretaries.)

The monster shown in the drawing, which was made sixteen days after birth, was born on the 14th June, 1866. The parents were perfectly healthy, half-caste Africans.

Owing to a great deficiency of osseous material, there was considerable arrest of development of the temporal, parietal and superior maxillary bones; and, in consequence, a very small amount of cerebral substance could be protected by the membranous expansion of the cranial centres; and there was evidence of effusion of serum in well-marked pouches, (A, figs. 1, 2) presenting a knobbed outline.

The lower jaw and os frontis were both perfect. The ears well developed, and the tongue strong and active. There was, however, no roof to the mouth, and, of course, no floor to the nose. The nostrils were quite imperforate. The eyes curiously free from eyelids, or lashes, or brows. The humours of the eye, by the contractile force of muscles external to the lobe, were squeezed forward, until the cornea threatened to slough, and assumed the shape and colour of a carbuncle. The upper lip was split through the fossa to

form the right harelip, and there was a double harelip on the left side. The septum was plainly visible when the mouth was looked at sideways; and the tongue could be easily watched in all its movements, owing to the absence of the upper jaw.

The child swallowed from a spoon, and appeared to hear, but seemed to have no sense of sight. All the exposed mucous surfaces were of a brilliant carmine tint.

The upper and lower extremities were also deformed. The second and third fingers of both hands webbed together for their whole length, with the hands hanging down.

The right foot wanted the distal phalanx of the great toe; and the left foot was clubbed and drawn inwards.

The frame of the child was otherwise good; the cheeks having colour in them, and the scalp covered over with hair like that of a mouse.

The parents state that it slept very much, micturated freely, but defecated rarely.

In the opinion of the friends of the family its condition was attributed to a fright.

The child died shortly after the sketch was taken.

A POLYPIFORM CYST, GROWING FROM ANTERIOR WALL OF VAGINA, DISTENDED BY A VISCID OLIVE-COLOURED FLUID, AND PROJECTING AT OS EXTERNUM VAGINÆ.—INCISION, IODINE INJECTIONS.—SUBSEQUENT REMOVAL BY WIRE ROPE ECRASEUR.

By J. Hall Davis, M.D., F.R.C.P.

OBSTETRIC PHYSICIAN AND LECTURER ON MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN AT THE MIDDLESEX HOSPITAL, ETC. ETC.

Mary G. Walsh, æt. 28, single, was admitted into Middlesex Hospital, under Dr. Hall Davis' care, January 8th, 1867.

Previous history.—Menstruation commenced at 13, and continued regular for three years, when it ceased for six months; it then again resumed its regularity, which has continued to the present time. Her illness commenced nine years ago, with severe pain in sacral and right iliac regions, and a profuse yellow discharge from the vagina. She was also believed to have displacement of the uterus. For the former, she was prescribed a vaginal injection; and for the latter, "an instrument" (a pessary?). As no improvement followed, she applied to the hospital.

Fig. 1.

State on admission.—Vaginal examination discovered a polypoid growth, distended with fluid; its wall of the thickness of vaginal mucous membrane, of a prolongation of which it evidently consisted. Its size was that of a moderate pear; it depended from the vesico vaginal septum, as shown in the sketch, but was ascertained, by the precautionary use of the catheter, to be distinct from the bladder itself; its thick pedicle, close to its attachment, was also found distended with fluid. There was no constitutional disturbance beyond that occasioned by hysterical symptoms and debility.

The discharge was evidently due to the irritation of the polypus, which, it would appear, had been taken for a prolapsed uterus.

Treatment.—Dr. Davis incised the polypus at its extremity, where its wall had become thinned; an ounce of an olive-coloured fluid, of the consistence of mucus, escaped. The finger was then passed into its cavity, up to its attachment. Only a few drops of fluid blood escaped from the cut surface. It was hoped that this interference, after injecting the cavity with tincture of iodine, might suffice.

January 16th.—The growth at the end of a week being but little smaller than when the fluid was discharged, Dr. Davis thought it best to remove it with the écraseur, which he did, under chloroform, by the wire rope; the upper fourth of the growth being purposely left, to avoid drawing into the écraseur the vesico-vaginal septum.

The patient subsequently had an opiate, and passed a good night, did well, and was discharged convalescent on the 25th instant.

Dr. West mentions having on two occasions met with vaginal cysts, one patient having two of the size of a chestnut growing from the posterior vaginal wall, and one smaller cyst growing from the anterior vaginal wall. They contained the same kind of fluid as in Dr. Davis' case. The other patient had for seven years been the subject of a cyst growth, closely imitating a vaginal cystocele. It sprang from the under surface of right nymphæ, was emptied and injected with tincture of iodine, but whether the fluid again collected is not known.

Scanzoni also gives an instance of a cyst growth from the right and anterior surface of the vagina. It was of the size of a pigeon's egg, but on being opened, a clear serous fluid was discharged. A solution of nitrate of silver was injected, and six months afterwards the tumour had disappeared.

Dr. Davis is disposed to agree with Virchow's opinion, that these cysts originate in obstructed follicles.

Small cysts, containing a transparent fluid, with thin

translucent membranous walls, of which recently a case occurred in Dr. Davis' ward, at the above hospital, appear also to have the same origin. These require only to be laid open in their full length, and do not show a tendency to return.

In operating on the larger supposed cysts, respectively springing from the vagina posteriorly and anteriorly, we should be sure, by examining the rectum in the one, and passing the catheter in the other case, that we are not dealing with a vaginal rectocele on the one hand, or with a vaginal cystocele on the other.

DIPHTHERIA.

By A. Wynn Williams, M.D.,

PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR DISEASES OF WOMEN AND CHILDREN; AND PHYSICIAN-ACCOUCHEUR TO THE WESTERN GENERAL DISPENSARY.

It is not my intention to give a detailed account of the history, &c., of diphtheria, but to offer a few remarks on the nature and treatment of this formidable disease, together with the particulars of cases treated on the plan recommended.

The tendency of writers on pathology in the present day is to designate disease as almost invariably depending upon some altered condition of the circulating fluid—a blood disease—in fact, the old Humoral pathology, overlooking that in reality very many diseases have a primary local origin. Thus it is with the disease we are about to consider, diphtheria. The late authors on this subject write of it as a disease having its own peculiar local characters, but general from its very earliest commencement—a disease in which some morbid material is at once received into the blood, and through it contaminates the whole system,—and look

upon the exudation of lymph, &c., about the throat and air passages as merely evidencing the further progress of the disease. The blood disease is considered the primary, the local disease the secondary. The correct elucidation of this point is of vital importance to the patient, and I do not hesitate to assert that, as far as my experience goes, the foregoing is not a true description of the origin, nature, and progress of diphtheria. We may as well consider the deposit of lymph or pus in a vaccine vesicle, and the inflammatory action that takes place around; a secondary consequence of the absorption of the vaccine virus into the system. But it may be argued, if, during the progress of a case of diphtheria the skin should happen to be abraded, it likewise will become covered with a diphtheritic deposit; this must be secondary to the blood disease, as the part becomes affected through the blood carried to it; although it is possible that the external deposit may derive its origin from an external source. Granted, however, that it is conveyed by the blood, it in no wise invalidates the theory of the disease having a primary local origin. We see the same thing every day in cases of syphilitic inoculation, a primary sore producing the secondary symptoms through the medium of the blood. The progress of the disease in my opinion is,—in the first place the patient is exposed to the particles of poisonous matter, whatever these may be, and draws them with his breath into the throat, where they obtain a lodgment generally in the small follicles in the tonsils, or it may be in some abraded surface of the mucous membrane lining the entrances to the air passages. They there incubate for some two or three days, causing a peculiar coloured crimson spot or spots, usually on one tonsil. This increases in vividness and extent for the next three or four days, when the first appearance of false membrane may be seen. In a very short time the number of spots increase, and soon extend to the adjacent parts until a more or less extended surface is covered with false membrane, having a very disagreeable odour. These local appearances are accompanied by the usual symptoms of

pyrexia and inflammatory sore throat, and frequently enlargement of the neighbouring glands. There is also in nearly all cases, even in the commencement, a peculiar nasal twang given to the voice, depending on local paralysis of the muscles of the fauces. During the progress of the disease up to the time of the deposit of false membrane the colour of the surrounding parts is less vivid, the pulse at the same time becoming less frequent, though still quick; but instead of gaining strength is more feeble, and often intermittent, the feebleness of the pulse keeping pace with the extent of the diphtheritic deposit. It would appear as if the system became further charged with the poison, which may be, and, indeed, is taken up anew from the under surface of the false membrane.

My experience is, cæteris paribus, that the greater the extent of false membrane the greater the feebleness of the pulse and depression of the system generally. We must not, however, overlook the fact that in some cases, where the local appearances would seem to indicate a mild form of the disease, the constitutional depression is most severe, owing to some peculiarity or idiosyncrasy. The patient would appear, as it were, to be at once prostrated by a minute dose of the poison.

Should the false membrane become detached or fall off, which it does usually from seven to ten days, it will either be reproduced in the old seat, or extend from the red edges of the excoriated surface or both.

In some cases after the ordinary symptoms have subsided, there is left more or less paralysis of the muscles of the fauces, and this, I presume by some reflex action, may affect distant parts of the body. The presence of albumen in the urine would appear to be of very little significance, and soon disappears.

I have already intimated that the late writers on diphtheria look upon it as a purely blood disease, and is only to be battled with successfully by remedies acting through the circulation, and deem the local affection of very secondary importance.

Dr. West, in his admirable work on diseases of children,

is undoubtedly of a different opinion, and considers there is a very marked connection between the early arrest of the deposit and the speedy recovery of the patient, and relates M. Trousseau's story of an epidemic of diphtheria, where all cases treated by the medical men, who confined themselves to constitutional remedies, proved fatal, while the only cures were wrought by an old woman, who applied to everybody's throat a "rough and rather violent escharotic." I quite agree with the old woman and Dr. West. Let the chief attention be given to the local disease. Get rid of the deposit as speedily as possible; allow no fresh poison to be absorbed from its surface. Never forget that the diphtheritic deposit undergoes very rapid decomposition, as evidenced by its fœtor, and that nothing depresses the system more than the absorption of the products of animal decomposition. Remove and prevent the reformation of the false membrane, and the constitutional disturbance and depression will almost invariably right itself, with the assistance of generous diet and tonic remedies. As regards local applications, I believe all escharotics, as nitrate of silver and strong mineral acids, to be most injurious themselves, causing a breach of surface which soon becomes a fresh seat for the deposit of false membranes.

The application I invariably use, is a very strong solution of tannic acid. Two drachms of the acid to two of spirit of wine and six of distilled water; two drachms of acid in one ounce of fluid. This I apply freely in every direction where there is any appearance of false membrane, by means of a bit of sponge or cotton wool, tied to the end of a stick, and order the parents to do the same three or four times a day. It is a remedy you may safely trust in the hands of the patients' friends, as a little bleeding from the mucous membrane, caused by the somewhat rough application of the remedy, is of no moment. When the deposit is situated low down in the throat, either in the œsophagus, or about the larynx or trachea, the solution should be injected over the parts by means of an india-rubber ball, with a silver tube curved at the end, with minute perfora-

tions at the extremity, now designated by the new name of fluid pulverizer, the one which is on the table having been made for me many years ago. Its use is rarely needed, unless the case has been long neglected. The effect produced by the application is the loosening and shrivelling of the false membrane by being, as it were, tanned, and its almost immediate expulsion. It would also appear by its stringency to brace up the vessels which secrete the membrane, and prevent its reformation and extension.[1] The internal remedies are a mixture containing chlorate of potash, acidulated with hydrochloric acid and bark, or some other vegetable bitter, followed by the tincture of sesquichloride of iron, and should the paralysis continue, with the addition of tincture of nux vomica or strychnia. Aperients should not be given unless absolutely required. I should also think that the frequent ablution of the mouth with a solution of permanganate of potash would be of service in severe cases, although I have myself never ordered it.

Case 1.—E. W—, female, æt. 5, dark complexion, was brought to me to the Dispensary, May 17th, 1866. Had been very ill for six days, ailing some days previously. Voice nasal. Pulse 120, feeble. Considerable dyspnœa and restlessness. Tongue clean and red. The whole of the soft palate, uvula, and tonsils, together with the back of the fauces, as far as could be seen, covered with false membrane. Ordered beef-tea, arrowroot, port wine, and bread and milk; to have the tannic acid solution applied three or four times a day, and to take the following mixture:—℞ Potassæ Chloratis ʒj, Acid. Hydrochloric. dil. ♏xxxvj, Tinct. Cinchonæ comp. ℥ss, Syr. Simpl. ℥ss, Aquæ Destil. ad ℥vj. M. sumat coch. unum magnum 3tiis vel 4tis horis. I applied the tannic acid solution myself, in the first instance, by means of cotton wool freely to every part, with the effect of causing the expulsion of half a tea-cupful of false membrane, and coagulated saliva, and the removal of nearly the whole of it from the fauces, &c. The case was one so well calculated

[1] Its well-known antiseptic properties must not be overlooked.

to display the good effects of the solution, that I asked some of my colleagues to witness its application.

May 19th.— In every respect much improved. The mother had followed out my orders, as to the careful application of of the solution. There is still a slight deposit on the tonsils and uvula. To continue remedies.

22nd.—Much better. No appearance of false membrane. Bowels have not acted for two days. To take Ol. Ricini ʒij and to continue the mixture.

24th.—Quite well, with the exception of a thickening in the speech. To discontinue all remedies, but to show herself next week.

31st.—As the thickening of speech still continued, evidently due to local paralysis of the muscles of the fauces, she was ordered Tinct. Ferri Sesquichl. ʒj, Tinct. Calumbæ ʒij, Aquæ Dest. ad ℥vj. M. sumat coch. unum magnum ter in die. This she continued to take up to the 21st of June, when, as there was still some slight paralysis, three minims of tincture of nux vomica was added to each dose of the mixture. This she took until the 28th, when she was dismissed cured.

Case 2.—H. G—, male, æt. 3½, fair complexion, was brought to my house, July 9th, 1866. Has been suffering from sore throat for a week past. The glands below the jaw considerably enlarged. Bowels have been moved three or four times a day, after taking grey powder from a chemist. Tongue red. Pulse 120, feeble. No appetite; much thirst; very restless. Diphtheritic deposit on tonsils, uvula, and velum, but to a greater extent on the right side. The tannic acid solution was applied freely to every part, and was ordered to be applied in the same manner three or four times a day, and to take the following mixture:—℞ Potassæ Chlorat. ʒj, Acid. Hydrochl. dil. ♏x, Tinct. Aurantii, Syr. Aurantii, āā ʒiij, Aquæ Destil. ad ℥iij. M. capiat coch. dua minima 3tiis vel 4tis horis. To be supplied with nourishment as in the previous case.

10th.—Passed a good night, and is more cheerful. Swell-

ing of glands much reduced. Tongue still red. Tonsils and uvula, where the deposit had been very red, with slight deposit on right tonsil and uvula. Pulse 110. Bowels acted once. Less thirst. Has taken food for the first time since a week past. To continue remedies.

I was informed that a child (not under my care) residing in the same house as my patient, had died this morning of diphtheria.

11th.—Still improving. Slight deposit on right tonsil. She continued to use the remedies for a day or two longer, when she was quite well.

Case 3.—C. G—, male, æt. 5, was taken ill about the same time as the last case, and resided in an adjoining house, was treated in the same manner, with the addition of having required the administration for a few weeks of Tinct. of sesquichloride of iron and nux vomica.

Case 4.—E. B—, female, æt. 38, residing in the same house as Case 2. Had attended much on the child that had died. Consulted me July 18th, 1866, complaining of sore throat, and the usual symptoms of diphtheria. Tongue coated with white fur, but red at tip and edges. Bowels regular. Pulse 112, not feeble. Much thirst. Tonsils of a bright red colour, with several small patches of diphtheritic deposit. Ordered nutritious diet. To apply the tannic acid solution three or four times a day, and to take the following mixture :—℞ Potassæ Chloratis ʒiv, Acid. Hydrochloric. dil. ʒiss, Syr. Aurantii, Tinct. Calumbæ āā ℥ss, Aquæ Dest. ad ℥viij. M. sumat coch. dua ampla 4tis horis.

19th.—Tongue cleaner. The throat and tonsils on left side swollen and red, with still some deposit on tonsil. Pulse 80. Altogether better. To continue remedies.

20th.—Much better. No deposit. To continue the mixture for a few days.

I did not see her again until the 4th of September, when she called to see me on account of the stiffness in the neck, and the peculiarity in her voice. This was due to paralysis

of the muscles of the fauces and neck. Ordered tinct. of sesquichloride of iron, and sixteenth of a grain of strychnine. At the end of a fortnight she was restored to her usual state.

The above cases having come under my notice about the same time, and forming, as it were, a group of themselves, I have chosen them to illustrate my mode of treatment. I have, however, treated many others in a similar manner, and with a like result.

Dr. Sansom said that if he understood the author of this paper to mean that the crusts of diphtheria contained a constant source of reinfection, and that removal of these was equivalent to removal of the prime cause, he could not help emphatically expressing his dissent from these views. In fact, he considered that they involved a paradox. The author considered that first infection arose from the lodgment of disease-producing particles in or about the tonsils, and these particles, his observations showed that he believed to be organized. He knew that after first infection there must be a period of incubation; so also it must be in reincubation. If then the formed crusts were a persistent source, this reincubation and reinfection must go on indefinitely, and thus the disease be prolonged in a manner which facts disprove; and there must be that relation between the crusts and the subjective symptoms which practice shows does not obtain. The illustration, by reference to vaccine or syphilitic virus, was unfortunate, for in neither of these do the discharges constitute a continuing source of reinfection in the same subject, nor does removal of either tend to systemic relief.

The difficulty of determining the natural history of diphtheria, and of investigating the proportional value of methods for its treatment, was singularly great. In no disease probably was there such a wide range in the variety of symptoms, and no disease was so liable to assume peculiar features in every single outbreak.

He (Dr. Sansom) once had his own uvula and tonsils covered by a false membrane, which simulated closely the characteristic appearances of the diphtheritic exudation. A friend of his frequently rubbed the throat with nitrate of silver, yet throughout the system symptoms were almost "nil."

Dr. Sansom's views of the matter was that the disease was undoubtedly originally caused by organised particles; that these absorbed into the blood, produced a train of morbid phenomena, and that they moreover gave rise locally to the growth of a false

membrane, which exerted a malignant influence solely by its physical properties, and chiefly by inducing an imperfect respiration.

In the treatment of severe and undoubted cases of diphtheria, he had used with the greatest success both internally, and as a lotion to apply to the crusts, sulphite of soda solution (ʒss ad ℥j). He believed that those agents were chiefly to be relied on which had the property of killing the organised disease-producing elements.

Probably it was from this cause that Dr. Williams's treatment by chlorate of potash was successful. Certainly his tannic acid lotion would tend to check the growth of the crusts, inasmuch as it is a very powerful deoxidising, as well as astringent agent. The body, however, which seemed to have the greatest power of arresting the vitality of a zymotic poison, was carbolic acid. This has a certain caustic action on mucous membrane, which may, in cases of diphtheria, prove rather useful than detrimental, and it may be used in any degree of dilution. He hoped that it would have the trial which it deserves.

In answer to the observations of Dr. Sansom, the author of the paper remarked that he did not think there was so much difference of opinion as to the origin of the disease, as he (Dr. Sansom) supposed. What the author of the paper contended for was, that diphtheria in its earliest commencement had a local origin, the blood being affected secondarily, and instanced the diseases vaccinia and syphilis, to show merely that the system generally became affected through poison introduced locally. As to the injurious effects produced on the system by the presence of the false membrane, he did differ. He considered that the depression of the system coincided with the appearance of the false membrane, and as the false membrane increased in extent, so did the depression of the system, and that this depression was caused by the absorption of fresh poisonous matter, as in pyæmia, into the system, from the decomposed and most offensive membrane, and that on the removal of the false membrane, this depression was at once ameliorated, and he had found no remedy so efficacious for this purpose, and at the same time so little likely to do mischief when trusted in the parent's hand, as a strong solution of tannic acid. Other remedies as mentioned by Dr. Sansom might be found beneficial, but he, the author, never had occasion to try them. As regards the diagnosis of these cases, he did not think that any one who had ever smelled the peculiar and most offensive odour emitted from the false membrane, could ever mistake it; that, together with the paralysis, when present, was sufficient to distinguish diphtheria from any other disease, and he had never found them proceeding from any other throat affection. These remarks will, in a great measure, apply also to the observations of Dr. Playfair, but he must be allowed to differ

from Dr. Playfair as to there being no pyrexia in vaccinia and syphilis before the perfection of the local manifestations. He considered that there was always more or less pyrexia present previous to the appearance of the vesicle, and the presence of pus.

In answer to Dr. Snow Beck the author stated that where the false membrane extended into the trachea, he endeavoured, but he admitted it was no easy matter, to inject the solution into the trachea by means of the syringe mentioned in the paper. He believed that if the solution was applied freely to the fauces, and about the entrance to the trachea, a certain amount got drawn in, or at any rate extended by attraction from one portion of the false membrane to the other, the effect being the removal of it not only from the larynx, but also from the trachea.

CASE OF DISEASE OF BOTH OVARIES.—THE RIGHT OVARY FORMING A COMMUNICATION WITH THE CÆCUM, AND EXTERNALLY.—THE LEFT TUMOUR EMPTYING ITSELF INTO THE RECTUM.—DEATH, AND POST-MORTEM RESULTS.

By Henry Cooper Rose, M.D., F.L.S.

Mrs. H—, æt. 42, a woman of sallow complexion, and somewhat anæmic, came under treatment on March 30th, 1866. She stated she had suffered from menorrhagia for about two years. Had had primary syphilis a few years before; had borne two children, the youngest of whom was sixteen years of age, and that latterly she had suffered a good deal of pain in the left side; this pain had troubled her for about nine months.

On examination I discovered a tumour in the left inguinal region, extending upwards to a level with the umbilicus, and which I diagnosed to be ovarian.

On May 11th, I sent her into the Middlesex Hospital, to be under the care of Dr. Hall Davis, where she continued under treatment until June 23rd, when, at her own solicita-

tion, she was allowed to return home. By this time she had become very low, weak, and emaciated, by the progress of the disease; and the tumour in the left side of the abdomen had suddenly enlarged considerably. She was very adverse to any operation, nor was she deemed a good subject for one. Dr. Hall Davis reported to me his conviction that it was a case of ovarian disease; that the uterine cavity was elongated, the fundus being drawn up by the tumour.

On June 29th I was sent for in great haste. She had, as she supposed, an attack of diarrhœa, and felt very faint and low. Four stools were voided one after the other rapidly, the character of the evacuations being described to me as most offensive, and "*like matter.*" They had all been emptied away, as they could not bear the odour. *At the same time the purging took place the tumour almost entirely disappeared,* and with it all sense of weight and oppression.

October 15th.—Since the last report she had had occasional looseness of the bowels, attended by simultaneous diminution of the tumour. The tumour sometimes became distended by flatus after, or during these attacks, and then subsided to the size of an orange, and rapidly filled again.

During the past month she had complained of pain in the *right side,* and at a point corresponding to the space between the superior and inferior spines of the ilium a small swelling existed about the size of a bantam's egg, and giving to the finger the sensation as if it contained air. It was evidently filled by flatus, and communicated with the bowel. She stated that when she felt a rumbling of wind in the bowels, this tumour would suddenly enlarge, giving rise to intense pain, which extended down the front of the thigh. She always relieved this pain by pressure with the palm of the hand, when the tumour would almost disappear.

At the end of November, finding this spot disposed to ulcerate, I punctured it, and gave exit to a puff of wind, and by degrees to some pus of a sanious and very fœtid character. This continued to discharge during the remainder of her life occasionally, to use her own word, "motion"

passing with the pus. Sometimes a large amount of flatus would also pass, rendering her bed for the time most offensive. There was also a tumour to be felt on the same side corresponding in position to that of the right ovary.

She died attenuated and exhausted on January 10th, 1867.

Post-mortem examination.—The abdominal walls having been reflected, and the omentum, &c., turned aside, a tumour about the size of a small melon occupied the situation of the left portion of the pelvis and abdomen, closely attached to most of the surrounding viscera, and connected with the upper and left portion of the uterus. In endeavouring to tear it away from the adhesions, the wall ruptured at one spot, and gave vent to some semipurulent ovarian fluid. On the right side, the sinus opening, at the point midway between the superior and inferior spines of the ileum, was carefully dissected away from the bone, and traced into a cavity having a dark-coloured surface, bounded posteriorly by the ileum, anteriorly, by the walls of the abdomen, above, by the cæcum, with which it communicated, and the remainder of its walls was made up by the right ovary, a great part of which was disorganized, and what remained was about the size of a small orange.

The whole of the parts were dissected away, and removed with the uterus, rectum, and vagina; the rectum being closely adherent to the left ovary, and communicating with it at its upper portion by a canal as large as a crow quill passing obliquely into it. Communicating with the abscess on the right side were two openings, one leading into the cavity of the diseased right ovary, and the other leading directly into the cæcum.

The accompanying drawing illustrates the relative positions.

DESCRIPTION OF PLATE II.

A. Uterus.

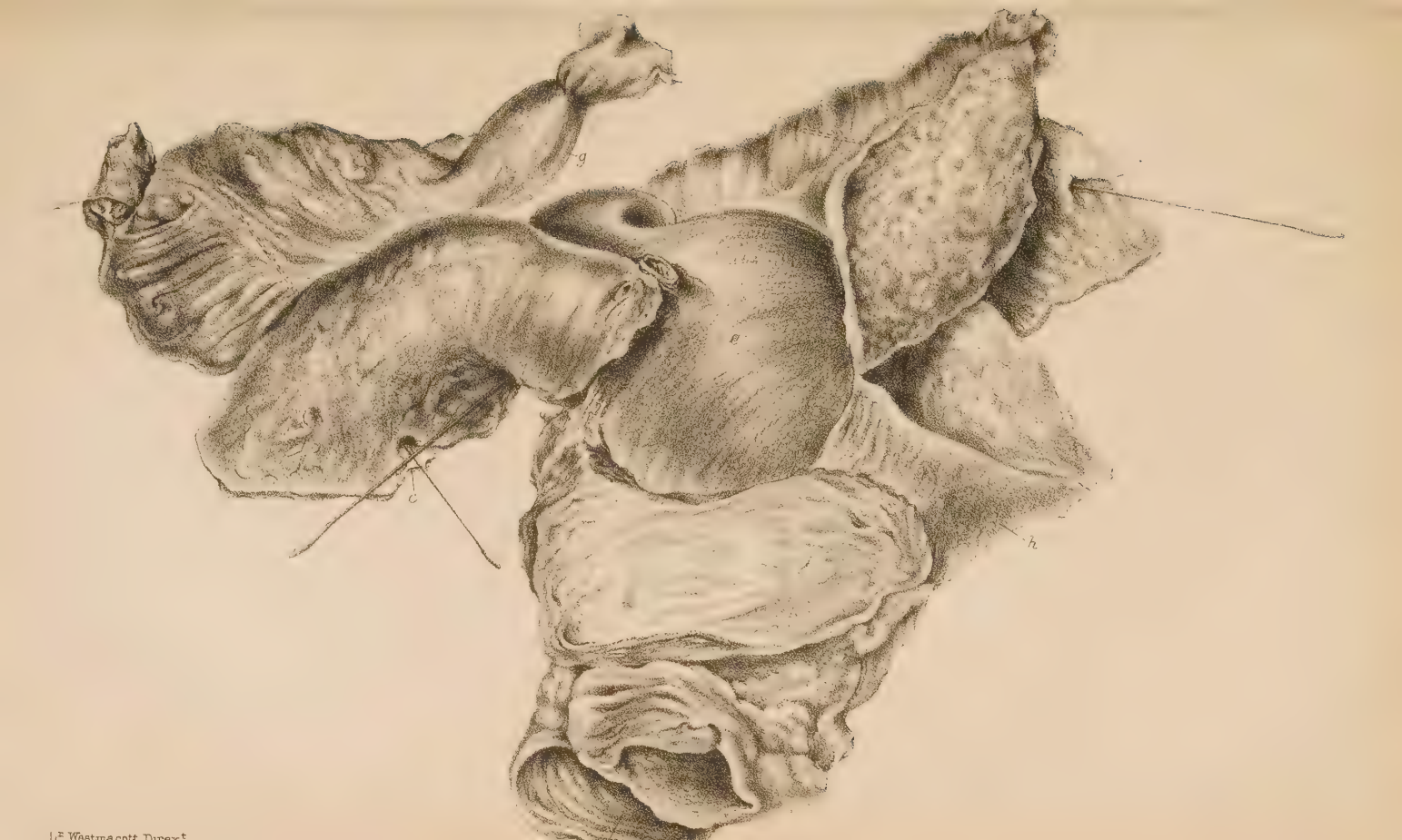
B, B. Rectum showing opening into it from left ovarian sac.

C. Cæcum with entrance of probe through right ovary.

D. Vagina.

E. Bladder laid open.

F, F. Right ovary.



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A CASE WHERE LOCAL ANÆSTHESIA, BY THE ETHER SPRAY, WAS EMPLOYED IN THE REMOVAL OF EPITHELIOMA OF THE CERVIX UTERI, BY THE ECRASEUR.

By Edward Parson, M.D. Lond.,

LECTURER ON MIDWIFERY, AND THE DISEASES OF WOMEN AND CHILDREN, CHARING CROSS HOSPITAL; AND PHYSICIAN TO OUT-PATIENTS, QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

For the observation of this very interesting case I am indebted to Dr. Savage.

The mother of two children, otherwise apparently in good health, became the subject of copious hæmorrhage from the uterus; this had been gradually increasing, until at length it became so profuse that she was reduced to a state of great anæmia.

It was discovered that she had a malignant growth on the anterior lip of the cervix uteri, extending round to the sides of the cervix, leaving a small portion posteriorly intact.

The body of the uterus was not enlarged, and the broad ligament and pelvis free from any deposits, leaving the uterus comparatively moveable.

Styptics had been used freely with the view of restraining the hæmorrhage, but as usual in these cases, they were of little avail.

Eventually it was decided upon to remove the morbid structure by the écraseur.

Accordingly chloroform was administered in the usual way, but it was found that long before sensibility was destroyed, or consciousness in the least affected, that the pulse was leaving the wrist, and a death-like sweat, accompanied by a deadly pallor, clearly indicated that chloroform would paralyse the heart before there was sufficient anæsthesia produced. Brandy was freely given her, and the chloroform tried again, but the same phenomena presented themselves.

The patient then determined to bear the pain produced by the écraseur without any anæsthesia.

Dr. Savage proceeded to tighten the écraseur very slowly, but again the same diminution of the heart's action occurred. Its apex could not be felt where it was before beating, and the pulse at the wrist so small as scarcely to be appreciated. The chain of the écraseur was loosened, brandy given, and friction over the precordial region employed, when slowly the heart's action became once more palpable.

Finding then, that it was quite impossible to administer chloroform, and equally impossible to remove the mass without some anæsthetic, it was resolved that ether should be employed, either to be inhaled, or applied directly to the cervix uteri in the form of ether spray.

After consultation with Dr. Richardson as to the possibility of applying the ether spray in operations on the cervix uteri, he was sanguine that it could be so applied, provided that the ether vapour could have a ready exit from the vagina; and further, if the spray could be continued whilst the écraseur chain was being tightened.

These conditions were fulfilled in the following way:

The patient was brought to the edge of the bed, in the usual obstetrical position. The perineum was drawn backwards, towards the coccyx, by a Bozeman's speculum. The sides of the vagina were held apart by two metal retractors, bent at right angles. The mass was seized by a pair of vulsellum forceps, and the cervix uteri tilted slightly forwards behind the pubis. Then the chain of the écraseur was gently placed around the whole of the vaginal portion of the cervix uteri, and a continuous stream of the ether spray was directed upon that part of the cervix encircled by the chain.

After a few minutes the effect of the ether spray was visible in the blanching of the red vascular growth, the écraseur was tightened, and the cervix was safely removed without pain to the patient.

There was comparatively no bleeding afterwards, and the patient complained of but little pain or annoyance, excepting

a feeling as if of slight burning, quite different from the sickening agony of the former attempted operation.

She has recovered without a bad symptom, and is now doing well.

Remarks.—The case is interesting from several facts.

1st. The peculiar susceptibility to the depressing effect of chloroform on the heart, possibly in some degree to be accounted for by the greatly diminished power of the heart from the frequent and excessive hæmorrhage which this patient had previously been suffering.

2nd. The pain of the crushing action of the écraseur on the cervix uteri paralysing the heart of the patient just as efficiently as the chloroform.

3rd. The application of the ether spray in deadening the sensibility of the diseased cervix uteri to such an extent as to allow the whole of the vaginal portion of the cervix to be removed with comparatively little pain or inconvenience.

4th. This case teaches another lesson, that in all probability the sensation of burning was owing to the intense cold conveyed by the metal Bozeman's speculum, and the metal retractors, upon all of which the ether spray could scarcely be prevented from playing; and possibly in future experience it may be advisable to employ a wooden duck-billed speculum, and wooden retractors.

Further, this case was a very proper one for the removal of the disease by the écraseur, from the freedom of any disease in other parts of the pelvis, and the almost impossibility of dealing with the case in any other known method.

And lastly, it is a practical fact in removing part of the cervix, that in this case at least, the application of the écraseur was greatly facilitated by gently drawing the cervix uteri slightly towards the outlet of the pelvis, in the axis of the parturient tract, instead of its being drawn directly downwards. This allowed the operator to fix the chain of the écraseur with the greatest possible precision, so as to take off the whole of the vaginal portion of the cervix without wounding the bladder.

Dr. Sansom said that he thought the case just narrated was one of the greatest interest and importance, for, apart from the main lesson which it taught—the value of local anæsthesia—there was a subsidiary one which came home to those who are engaged in the study of chloroform. The case showed that exactly those symptoms of threatened syncope which were produced by chloroform were produced also by pain. From hence it would be a far-fetched inference that many of those deaths which had been ascribed to the fatal influence of the anæsthetic were really due to emotional causes wholly independent of the chloroform. It was a significant fact that in the very first case in which trial of chloroform as a practical anæsthetic was about to be made, the patient died suddenly, before even the chloroform was brought into the room. Such instances as these explain to us with much probability the reason why by far the greater number of deaths ascribed to chloroform have been in the very earliest stage of its influence; in such we see the great probability that chloroform may have had little or no share, and it is an undoubted fact that such deplorable events occurred in the days before the great boon of chloroform was given to humanity.

There could be no doubt of the value of Dr. Richardson's ether spray process in this case.

He (Dr. Sansom) would like to make one suggestion—whether, seeing the great influence of extreme cold in destroying the activity of cell-growth, it would not be worth while to try the influence of the ether spray alone, without the knife, in such a case as the foregoing. He could conceive that in cases of fungoid growths for example, repeated applications of the ether spray might be a directly curative measure.

THREE CASES OF A THIRD NIPPLE IN THE HUMAN SUBJECT—ONE CASE HEREDITARY.

Reported by W. Bathurst Woodman, M.D.

These three cases are all alike in occurring on the left side, and also in their relations to the normal breast. Two were females and one a male. The first of these, Susan M—, æt. 32, a married woman, living in Stepney, was admitted a patient of the London Hospital, for acute rheumatism. She has three nipples. None of her relations, on either father's or mother's side, are like her in this respect, as far as can be

traced. The extra nipple is on the left side, is smaller than the others, and not very prominent. It is placed two inches lower than that of the left breast, and one inch nearer the middle line of the body. It appears to be connected with the breast by a little bridge of gland structure; and the portion of gland belonging to it, and immediately beneath it, is about the size of a hazel nut. The nipple is capable of erection, has a distinct areola, and milk flows freely from it when she suckles. Of her children, only the eldest girl resembles her in this. I asked to be allowed to see the child, and she was therefore brought to me by the father. The little girl was ten years of age, well-formed, and presenting no other peculiarities; but has, like her mother, an extra nipple below the left breast, in a corresponding situation to the mother's. Like hers, it has an areola, erectile tissue, and a rudimentary gland. The father, an intelligent man, knew of no instances of any abnormality amongst his own relations.

The third case was in a brewer's man, æt. 36, admitted to the London Hospital for pneumonia. He has three nipples, the extra one being on the left side, as in the former cases. It is one inch and a half below that of the left breast, and one inch and a quarter within a vertical line drawn through that. In size it is a little less than the others, but has a distinct areola, erectile tissue, and a rudimentary gland can be felt. He has no children, and is sure that none of his relations resemble him, because the matter has been often talked about amongst them.

I record these cases for two reasons:

First, as a contribution to the statistics of these abnormalities; and,

Secondly, in order to suggest the importance, in a medico-legal sense, of not only noticing these cases, but of recording them in our note-books, with all possible accuracy, especially in the case of new-born infants, as it is evident that they might have great importance in questions of disputed identity or paternity.

A CASE OF CHRONIC INVERSION OF THE UTERUS, WHICH HAD EXISTED FOR MORE THAN FIVE YEARS, WITHOUT SERIOUS SYMPTOMS.

Reported by W. Bathurst Woodman, M.D.

In March, 1864, a woman was brought to the London Hospital, on a stretcher, in a state of complete insensibility from gin-drinking. She was said to be a married woman, and a notorious tippler. Cold affusion to the head, and the use of the stomach-pump, with an emetic afterwards, roused her slightly; and I ordered her to be undressed and put to bed, to sleep off the effects of her potations. On going to the ward to give some further orders, the nurse told me that in undressing her, they had discovered "a tumour growing from the womb," which was, the nurse thought, a "polypus." This induced me to examine the patient, when I found between her thighs, external to the vulva, a nearly globular tumour, almost as large as a fœtal head of average size, and covered with a brownish-red and skin-like mucous membrane, ulcerated and excoriated at its most dependent part. The vagina was clearly prolapsed, but no opening like the os uteri could be seen, although carefully searched for. But at the superior end of the mass, nearest the vulva, was a ring-like thickening, which no doubt was the os uteri. I applied a slight pressure to the lower end, and the whole mass retreated within the woman's roomy pelvis. As she was covered with vermin, and filthy in the extreme, I decided, before making any further examination, to wait till the morrow, when she might safely be given a bath.

The next day, on examining again, I became fully convinced that it was really the inverted uterus, which I had returned into the vagina, but I could not succeed in reducing the inversion. She told me that she was fifty years of age, and that her "womb had been just so between her legs, ever since her last baby was born, which was more than five years ago." A midwife had attended her. The child was stillborn. She said she had "been poorly" a few times afterwards, and then

"it seemed all to come from the tumour." She had been told it was a cancer! "Sometimes she had a little trouble with her water, and she suffered from backache." But she did not appear to feel any pain from the ulcerated fundus. She begged to be allowed to go home at once, and was therefore made an out-patient under Dr. Barnes's care, who was then at the London Hospital. She failed, however, to attend, and as she evidently cared little about it, is probably still unrelieved.

P.S.—Was the large size of the uterus partly due to her not suckling the infant and her intemperate habits?

MARCH 6TH, 1867.

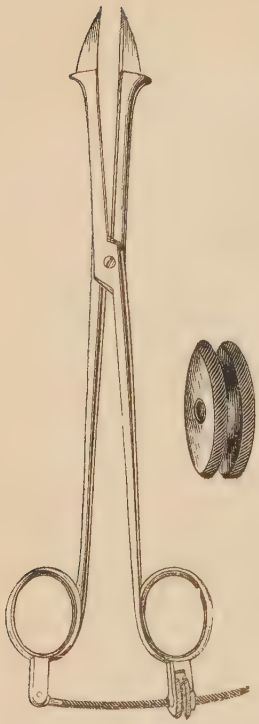
Dr. JOHN HALL DAVIS, President, in the Chair.

Present—128 Fellows and 29 visitors.

Drs. Thomas Brown, E. J. Fairland, and Messrs. F. M. Corner, Fred. E. Webb, were admitted Fellows of the Society.

The following gentlemen were elected Fellows:—Drs. Charles Burnett, E. L. Crowther, W. Dunderdale, David W. Roberts, R. H. Wilbe, F. J. Lilley; Messrs. Henry Croucher, H. W. Freeman, J. W. Hembrough, Benj. Miller, T. W. Wasdale Watson.

Dr. GRAILY HEWITT exhibited a specimen of deciduous membrane expelled from a woman supposed to be the subject of double uterus.



Dr. Cleveland exhibited a Perforator of the ordinary wedge-scissors construction, to which was added, at the extremity of the finger-holes, a slightly curved screw, three and a half inches in length, over which a quick traversing wheel was made to pass, and so open the blades of the instrument.

The advantages claimed were great power in separating the blades, steadiness of manipulation, and a definite knowledge of the extent of the perforation.

The adaptation had been carried out by Mr. Pratt, of Oxford Street, and could be applied to ordinary perforators.

The President then addressed the meeting, and said—"It is my painful duty to announce to the Fellows of this Society the following resolution of the Council:

> 'That in the opinion of this Council the published matters in relation to the performance of clitoridectomy by Mr. Isaac Baker Brown, justify the Council in recommending the Society to put in force against him Law IV, Sec. 2, which provides for the expulsion of a Fellow.'"

The President then stated that the next meeting, namely, April 3rd, would be made Special for the consideration of the resolution just read, and balloting thereon.

After a discussion in which the following gentlemen took part:—Dr. Hall Davis; Dr. Snow Beck; Dr. Routh; Dr. Tyler Smith; Dr. Barnes; Dr. Wynn Williams; Dr. Tanner; Dr. Holt Dunn; Dr. Head; Dr. Savage; Dr. Rogers; Dr. Sedgwick; Dr. Langmore; Mr. Baker Brown, jun; Mr. Burton; Mr. Harper; Mr. Scott,

It was proposed by John Moulden Burton, Esq., and seconded by Dr. Sansom:

> "That the meeting is satisfied with the assurance of the Council, that the published statements shall be circulated among the Fellows, within a week or ten days of the present time."

The visitors having retired, the above resolution was put to the meeting by the President, and was carried by a large majority.

ON A RARE CASE OF INTERMURAL FŒTATION.

By J. Braxton Hicks, M.D., F.R.S.,

CO-LECTURER ON MIDWIFERY AT GUY'S HOSPITAL; EXAMINER IN MIDWIFERY AT UNIVERSITY OF LONDON, ETC. ETC.

In a paper on "A Case of Intermural Fœtation" in 'Guy's Hospital Reports' (1860), I remarked that it is possible that in some cases of this form the fœtus bursts into the cavity of the uterus, and thus may be mistaken for ordinary abortions.

The case about to be related confirms this opinion, and as I believe it to be unique, not only in this respect, but in the mode in which death occurred four days after, it may not be unacceptable to the Society.

I did not see the case during life, but its history was kindly furnished me by Dr. Puckle, of Denmark Hill, in whose practice it occurred. I was, however, present at the necropsy.

Mrs. T—, æt. 35, was delivered of her first child in August, 1864. Rather more than a year before her death, she aborted at the fourth month. It was a remarkable fact that not a drop of blood was lost on that occasion. The body of the fœtus was first expelled, and next day the head. No trace of the placenta was found. She recovered very well, without any blood having been lost.

About five and a half months before her death, she again conceived, but its exact date was concealed by frequent metrorrhagia.

She continued to enlarge till the 8th December, 1866, when, after some pains, a fœtus was expelled about the size of a five and a half month's fœtus. No hæmorrhage occurred; but the secundines not having come away, Dr. Puckle introduced his fingers into the uterus to remove it, but only found a ragged opening with something soft within it. Thinking it safer to leave it untouched, he treated the case in the usual manner. She went on for four days very well, when very violent bearing down pains occurred, in the midst of which she complained of violent pain in the abdomen; she became pale and faint, with gaspings, and died in a collapsed state in two hours.

Necropsy next day. The abdomen only opened.

The body was very anæmic. On opening the peritoneum, clotted blood was found diffused everywhere between the viscera without much displacement. The quantity of clot was about equivalent to two pints of blood. The serum had gravitated into the pelvis, welling up freely on pressure downwards.

On removing the clots, an unusual enlargement of the right side of the fundus of the uterus was seen, reaching above the brim. Large veins were coursing over this enlargement beneath the peritoneum; and a rupture about three quarters of an inch long had taken place at its upper part.

Through this the blood had escaped, and through it could be seen placental villi. The whole uterus was then carefully removed. No adhesions existed anywhere. The body of the uterus was enlarged, and symmetrical, except at its upper part towards the right side, the seat of the above-named enlargement. This extended two inches beyond the natural limits of the enlarged uterus, being about two and a half inches in diameter at its base, where it sprang from the walls. The blood-vessels coursing over it were very noticeable, some of them one third of an inch in diameter.

A section was now made vertically through the enlargement.

The walls generally were about three quarters of an inch thick. The cavity about five inches long. At the upper part, rather to the right side, was an opening, about two inches diameter, with ragged sloughy-looking edges, which were loose and free.

Inside this opening could be seen the placenta in a state of slight decomposition for about half an inch into its substance; the rest was pale and natural. The section showed that the placenta filled the whole of the enlargement above referred to.

The walls of the uterus were thickest at the lacerated opening, as may be seen in the drawing. From this point they became gradually thinner, thus being most attenuated at the spot where the laceration took place.

Large sinuses were observed in the walls, as in ordinary pregnancy, and as has been observed in other cases of extra uterine pregnancy where it has been interstitial or tubular.

The mucous membrane of the uterus was not lined with any marked decidua. It was pale towards the os uteri, but gradually became redder towards the opening referred to.

The total length of the uterus externally was eight inches, and its diameter six inches.

It will be understood that there was no communication between the two lacerations, but that sound placenta of two inches thickness interposed.

From this it appears to me that an intermural fœtation had been formed; that it continued enlarging towards the

peritoneal cavity, and towards the uterine cavity, at about the same rate, but, perhaps, rather more readily towards the uterine, into which doubtless it bulged, so as to distend the uterus to the size and form already mentioned.

Then this portion gave way, permitting the escape of the fœtus, thus simulating an ordinary abortion.

Upon this the uterus shrank, and the tissue retracted, leaving the free lacerated edges as the only evidence four days after of that portion which bulged into its cavity.

Then the mass of placenta being a source of irritation to the uterus, contractions ensued, the effect of whose pressure may be gathered from looking at the section I have given. It must clearly cause compression of the cavity containing the placenta, producing great pressure on the peritoneal side. This gave way, rupturing a large vein just beneath the peritoneum, thus producing the fatal hæmorrhage.

I am sorry to be unable to produce the specimen, but the sketch now sent round was made from it.

The drawing will, perhaps, show the state of parts more clearly.

DESCRIPTION OF PLATE III.

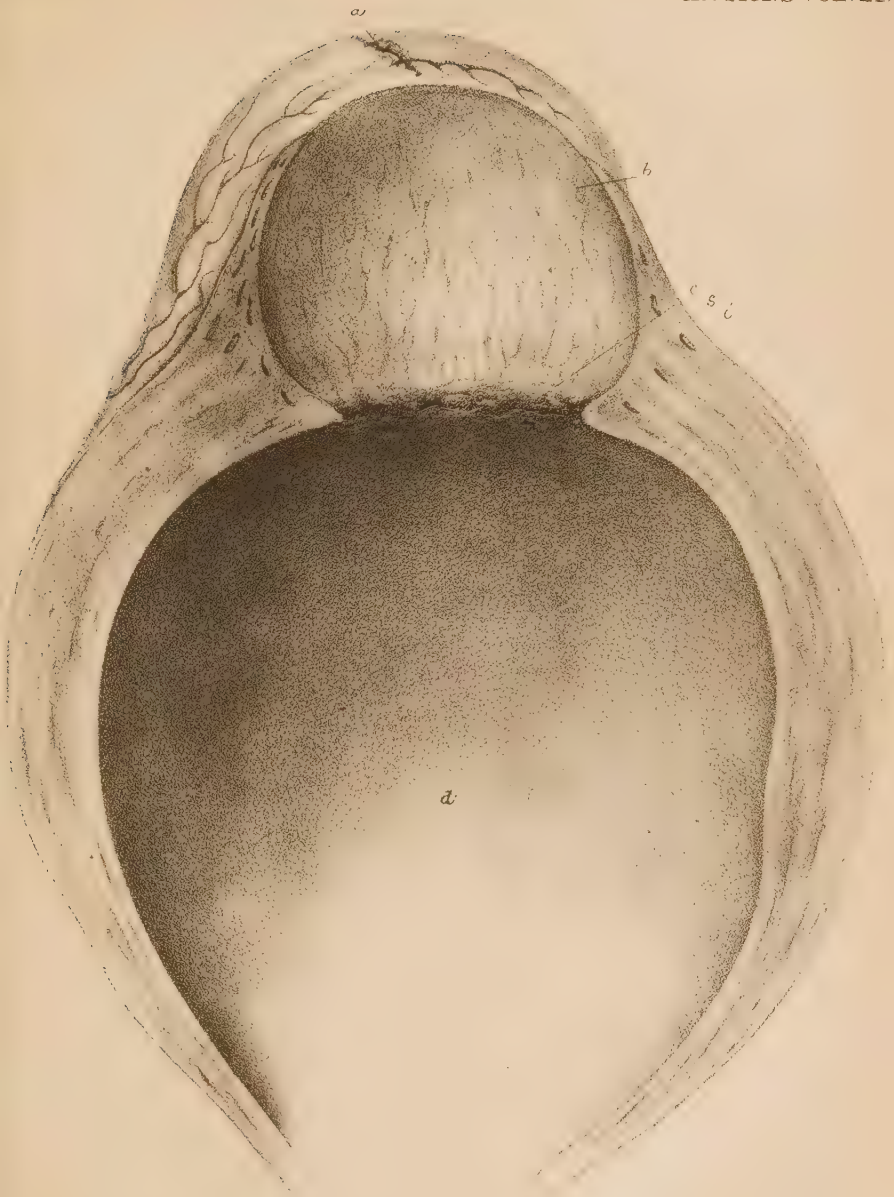
a. External rupture.

b. Placenta in cavity.

c. Ragged opening into uterine cavity.

d. Uterine cavity.

s. Sinuses in wall of dilated part.



Dr Westmacott dirext W. West lith.

APRIL 3RD, 1867.

SPECIAL MEETING.[1]

Dr. HALL DAVIS, President, in the Chair.

Present—237 Fellows.

The PRESIDENT stated that the Fellows had met on this occasion to consider and vote upon the resolution of the Council, which had been read to them at the last meeting.

He also wished to say that the request of the Fellows had been complied with, and the charges against Mr. Isaac Baker Brown had been printed and circulated amongst them.

Mr. SEYMOUR HADEN proposed, and Dr. ROBERT BARNES seconded the following resolution:

> "That in pursuance of the resolution of the Council notified to the Society at the General Meeting of March 6th, Mr. Isaac Baker Brown be, and hereby is removed from the Fellowship of the Obstetrical Society of London."

Mr. ISAAC BAKER BROWN addressed the meeting; and the following gentlemen took part in the discussion which ensued: Dr. Routh; Dr. Tyler Smith; Dr. Savage; Dr. Oldham; Dr. Wynn Williams; Dr. Mark Tanner; Mr. Robins; Mr. Squire; Mr. Chambers.

After all discussion had ceased, the ballot was closed, and

[1] A complete record of the whole proceedings in reference to Mr. I. Baker Brown has been ordered by the Council to be kept in the custody of the officers of the Society.

the scrutineers, Dr. T. H. Tanner, Dr. Edward Parson, Dr. Braxton Hicks, and Dr. Murray, declared the following to be the result:

For the removal of Mr. I. Baker Brown	194	votes.
Against the removal . . .	38	,,
Fellows not voting . . .	5	,,
	237	

The President then said,—"Chapter IV, Rule 2, of the Bye-laws and Regulations of this Society states that, if on a ballot taking place, two thirds of the Fellows present shall vote for the removal, the President shall declare the Fellow in question removed accordingly. In accordance with that rule it is my painful duty to announce that Mr. Isaac Baker Brown is removed from the Fellowship of this Society."

A vote of thanks to the President and Council was proposed by Mr. Nunn, seconded by Mr. Chance, and carried.

The meeting then adjourned.

MAY 1st, 1867.

Dr. Hall Davis, President, in the Chair.

Present—53 Fellows and 11 visitors.

Dr. Crowther and Dr. Lilley were admitted Fellows of the Society.

Dr. C. Burnett, of Biggleswade; Dr. Croft, Mr. Freeman, of Bath; Dr. May, of Birmingham; Mr. Parks, of Bury, Lancashire, having signed the obligation paper, were also admitted Fellows.

The following gentlemen were elected Fellows of the Society: Dr. R. Mitchell; Dr. A. J. Watts; W. F. Bennett, Esq.; Charles Neate, Esq.; E. Parker Young, Esq.

Dr. Eastlake exhibited a case of Complete Epispadias in a male infant, and drew attention to its extreme rarity. He remarked that instances of epispadias were so seldom met with in this country, that but little mention was made of the subject in works on surgery and pathology, nor was any allusion to it found in Sir J. Simpson's 'Memoir on Malformations,' or in Dr. Beatty's 'Paper on Doubtful Sex.'

Dr. Eastlake further stated that M. Dolbeau, who had written a very comprehensive treatise on the subject, in describing the difference between hypospadias and epispadias, had drawn attention to the interesting fact, that in the former, which consisted of a division in the corpus spongiosum, the urethra still retained its normal course; while, in the latter, which consisted in a separation of the corpora cavernosa, the course of the urethra was misplaced.

The peculiar features in the case exhibited were—firstly, there was no extroversion of the bladder, a condition generally associated with such malformations; secondly, the infant could retain its water; and thirdly, the pubic bones were united.

Dr. Graily Hewitt then exhibited some specimens of a new form of Pessary which he had for some months past

employed in the treatment of cases of anteversion or anteflexion of the uterus. It consists of a ring of copper wire, covered with gutta percha, and bent into a peculiar shape.

The upper part of the ring passes behind the os uteri; the lower part is just within the vulva. The middle part of the ring is bent upwards so as to form two mamillary-shaped arms. When in position, the uterus cannot fall forwards, being supported by the arms in question. This instrument, which is worn without the slightest discomfort, must be adapted, as regards size, to the vaginal canal. It does not slip.

Dr. Graily Hewitt stated that he had employed the instrument in a great number of cases, and had full reliance on it as a means of treating this very intractable form of displacement of the uterus.

In cases of ante- with lateri-flexion, one arm of the instrument is made to project a little more backwards than the other, and the uterus can thus be kept in perfect position.

A FATAL CASE OF RUPTURE OF THE UTERUS, OCCURRING AT THE EIGHTH MONTH OF PREGNANCY.

By Robert Dunn, F.R.C.S., &c.

Dr. Radford, of Manchester, in his valuable communication to this Society "*Of cases of laceration of the uterus, with remarks,*" very justly observes—"That laceration of the uterus is one of the most dangerous accidents which happen to women during labour, and is amongst the most appalling to the obstetric practitioner." Cases, however, of *rupture of the uterus,* like those of *concealed accidental hæmorrhage,* although among the most fatal, are happily of very rare occurrence. During a period of upwards of forty years of extensive midwifery practice, I have only met with one instance of each of these kinds of accident, and what may seem strange enough, they have both occurred in my own practice during the past year.

According to a statistical statement furnished by Dr. Fleetwood Churchill, there was one instance of ruptured uterus in 1331 cases. My own experience is one in 6319.

Case.—On Tuesday evening, November 13th, a little before eleven o'clock, I was hastily summoned to Mrs. S—, æt. 26 years, the messenger stating that she had been taken in labour. This was her fourth pregnancy, and in which she was then eight months advanced. I had attended her in a previous accouchment, some twenty months before, which was an easy labour, and she made a quick recovery. But in her first she had to be delivered by the forceps, and both in that and in the second had had adherent placenta and great hæmorrhage. In these I did not attend her.

During a visit to Ramsgate in August of the previous year, she had a miscarriage, and passed a fœtus of five months; there was no flooding, and no placenta followed; but from that time she was subject to strange feeling about the womb.

Mrs. S— had spent the day at a bazaar, and being fatigued by the exertion she had undergone, she went early to bed. She awoke suddenly from sleep soon after ten o'clock, and

found herself deluged with water; and on getting out of bed, something passed from her: and I was immediately sent for. I found her in bed. She had no labour pains, and there was no hæmorrhage; but she directed my attention to what had come from her, which I found to be a membranous substance, of a leathery appearance, quadrangular in shape, and about three inches by two. I looked upon this as the relic of the placenta of her former miscarriage.

On making a vaginal examination, I found the os closed, and no bloody discharge. I remained about an hour, when, at her own expressed wish, as there were no pains,—no evidence of labour coming on, I left, but requested to be sent for, should labour pains supervene. The next morning I learned she had passed a quiet comfortable night; and in this state she continued throughout the day, with occasional trifling pains, until between five and six o'clock in the evening, when I was sent for.

On examination I found the os uteri open to the size of a crown piece, the pains very frequent, and attended with more than ordinary suffering. After the lapse of about three hours, the os was fully dilated, the pains excruciating, but not effective. She had a capacious pelvis, and there was no lack of room, but evidently a great want of effective expulsory power. I, therefore, gave her, as I have always been in the habit of doing, under similar conditions, half a drachm of the secale cornutum, infused in boiling water, with a dessert spoonful of brandy. Strong expulsory pains soon followed after, and after three or four such, the child's head was suddenly forced into the world, under severe suffering, and loud screaming. The cord was round the child's neck, and there was considerable difficulty, from its extreme shortness, in extricating it from the head. And to this circumstance, at the time, I attributed the tardy progress of the labour. As no effective pains followed the expulsion of the head, after waiting awhile, I assisted the child into the world. It was living, and a male, of about eight months, but it did not survive many days. I immediately bandaged her tightly up, but in doing this, I was forcibly

struck with her state of extreme exhaustion; and more especially so, from the fact of there being no flooding to account for such a condition. I gave her freely brandy and ammonia. After waiting for upwards of half an hour, and no pains supervening, I passed my forefinger up, and along the cord anteriorly, to the point of its insertion. The placenta was firmly adherent all round, and on putting the cord gently upon the stretch, the few fibres with which it was connected, gave way, and it became completely detached from the placenta. Knowing as I did, that on two former occasions she had had adherent placenta, and not at the moment, I candidly confess, having any suspicion that there was anything more grave in her present condition, I at once bared my arm, and having well lubricated my hand, I passed it up through the os uteri, without difficulty, into the cavity of the uterus. On its posterior part, I came in contact with something which, for the moment, rather puzzled me—a hard rim, but which I was not long in making out to be an extensive transverse rent in the posterior wall of the uterus, for my fingers became almost immediately entangled with a fold of intestine. I directly withdrew my hand, and sent for my son and Dr. Robert Lee. The patient was so faint and exhausted, that I had to administer ammonia, brandy, &c., freely.

When Dr. Lee and my son arrived, I gave them all the particulars which I have now detailed. Dr. Lee, at the time, thought that she was in a dying state, and that unless she rallied a little, nothing could be done. We continued the administration of stimulants, and after waiting for some time, I removed the napkin, with the intent of seeing whether any flooding was going on, when I found a fold of intestine protruding from the vagina. This Dr. Lee gently returned within the vagina, applying a warm napkin closely to the external parts. She still continued in such a state of collapse, with sickness and vomiting, that he considered nothing could possibly be done, and that her case was utterly hopeless. Dr Lee left, after waiting upwards of an hour. I remained for some time longer, and my son continued to watch Mrs. S— throughout the night. When I saw her the next morn-

ing, about nine o'clock, I found her much in the same state as she was when I left her over night, but continued retching and sickness, had caused more of the bowel to protrude, which now presented a livid, and even a black looking aspect. I could not look upon her state otherwise than as being utterly hopeless, and thought that she could not survive many hours. At one o'clock, about fourteen hours from the birth of the child, she was kindly seen by Dr. Tyler Smith, who, after carefully inspecting the black and strangulated portion of the protruded intestine, pronounced the case to be hopeless. The time was past for the administration of chloroform, and for making the attempt, while under its influence, of removing the adherent placenta, and of returning back the protruded bowel. He made the remark that such a procedure, if early instituted, and before any change had taken place on the protruded bowel, seemed to him to have been the only thing that could have been attempted under the circumstances. But to my mind, the state of continued prostration, retching, and sickness, indeed, of general collapse, which persisted from the first, up to the time of the appearance of the black and strangulated character of the expelled intestine, contra-indicated the use of chloroform. Still, strange to say, she continued to linger on for five days, and nearly three yards of intestine protruded before she succumbed.

She died at eight o'clock, on Tuesday morning, being the sixth day from the time of her delivery; and the next morning a post-mortem examination was made in the presence of Dr. Tyler Smith, my son, Mr. Hedley, and myself. The viscera of the abdomen were loaded with fat. On passing the hand downward, behind the posterior parietes of the uterus, the fingers came in contact with a transverse rent, through which they readily passed into the cavity of the uterus, and through which the expelled bowel had been protruded.

In the interior of the womb, the degenerated remains of a most firmly attached placenta were seen, presenting a very peculiar appearance, such as I have never before seen. I regret that no microscopical examination of the uterine tissue was made, as that would have decided the question of

fatty degeneration, on the existence of which, from the peculiar appearance that the uterus presented, I am strongly inclined to believe.

Dr. Barnes said the descent of intestine through the rent was not necessarily fatal. He had seen a case in which rupture took place during delivery of triplets: all the children and the separate placentæ were expelled. He saw and felt the fold of intestine. The woman was collapsed for some time, but she quite recovered. A few weeks ago he had seen a case, some miles from town, in which rupture had taken place the previous day, and the fœtus had escaped into the abdominal cavity. The woman had rallied a little from the shock, and gastrotomy, which was performed whilst the patient was under the influence of chloroform, seemed to add nothing to the prostration; but she sank in a few hours. He extracted a large child with hydrocephalus. With regard to the causes of rupture of the uterus, of course they were various; but one leading condition, he was of opinion, lay in the loss of relation between the strength of the muscular walls of the uterus and of the cervix. In most cases, the cervix was not expanded, and the uterine wall gave way before the resistance offered. In a large number of instances there was no disproportion between child and pelvis. Rupture occurred in women whose strength had been reduced by preceding pregnancies—whose muscular system had lost its integrity. In two cases of this kind he had found the uterine tissue generally weak by degeneration. If ergot were given in such cases before the os uteri was dilated, of course the risk of laceration was much increased.

ON THE TREATMENT OF LABOUR, COMPLICATED BY OVARIAN TUMOUR;

By W. S. Playfair, M.D., M.R.C.P.,
ASSISTANT OBSTETRIC PHYSICIAN TO KING'S COLLEGE HOSPITAL.

At a former meeting, the subject of ovarian tumours complicating delivery was brought under the notice of the Society, and Mr. Berry's paper was followed by an interesting communication from Dr. Greenhalgh 'On the Relative Merits of Craniotomy and the Cæsarean Section.'

In the discussion which followed the reading of that paper I ventured to make some remarks on the treatment of labour complicated by ovarian tumour pushed down in front of the presenting part.

It so happened that my attention had been particularly drawn to this subject by a case I had met with in my own practice, and in order to determine the relative merits of the various methods of treatment adopted, I had tabulated all the recorded cases of this complication I could lay my hands on. A number of these have already been collected in Puchelt's elaborate 'Dissertatio de Tumoribus in Pelvi partu impedientibus,' a work, however, which is perhaps not very widely known, nor readily accessible. The remainder are scattered through various periodicals and monographs. It seemed to me that it might be in accordance with the objects of this Society to lay before it the table which I had drawn up of these cases, showing, as it does, the relative success which has attended the various methods of treatment adopted. And as the subject of ovarian disease has recently attracted so much attention in this country, I thought that some consideration of cases in which it had complicated delivery might, at the present time, be not altogether uninteresting.

I do not profess to have drawn up an exhaustive record of all the published cases; some may possibly have escaped my notice. But, at any rate, I have gathered together a sufficient number to admit of a reliable comparison of the various methods of treatment employed.

I have collected the details of fifty-seven instances in which a tumour of the ovary was pushed down in front of the presenting part, and caused an obstruction to the passage of the child. I have limited the cases to those in which the tumour was ovarian, and, with one or two exceptions separately noted, have not included any in which there was reasonable doubt as to the nature of the case.

Before discussing the results of treatment, however, permit me to relate very briefly the case which occurred to myself, No. 55 in the accompanying table.

This was that of a young woman, æt. 19, an outdoor-patient of King's College Hospital, to whom I was called by the resident physician accoucheur one evening about 8 o'clock. She had been in strong labour for more than twenty-four hours. On examination I found the cavity of

the pelvis occupied by a firm, semi-elastic tumour, seated between the vagina and rectum. It was of sufficient size to offer an insurmountable obstruction to natural delivery, there being little more than two inches clear space in the antero-posterior diameter; the measurements of the pelvis were, however, pretty equally diminished in every direction. No neck or pedicle could be made out. The os was fully dilated, the head firmly engaged in the brim, and the tumour tightly jammed down in front of it. The tumour seemed fixed and immovable, and there was no sense of fluctuation apparent. Although there was no evidence of contained fluid a full-sized trocar was introduced, without, however, any favorable result; an equally futile attempt was made to return the mass above the brim of the pelvis. Under these circumstances it was evident that only one of two alternatives was left—craniotomy or the Cæsarean section. In accordance with the usual precepts taught in this country the former was chosen, and as farther delay only seemed to make matters worse, and the pulse was beginning to rise, I proceeded at once to perforate. This was effected without much trouble, but the extraction of the head was attended with the greatest possible difficulty. Even after the whole of the brain substance had been removed, and as much of the vault of the cranium as possible, little or no progress had been made. Two hours and a half had now passed and little had been done, when I procured Dr. Simpson's cranioclast and succeeded with it in effectually destroying the base of the cranium, and eventually, but not without much difficulty, in extracting the head. The tumour then slipped up into the cavity of the abdomen, and the body was easily drawn out. The extreme tediousness of the operation was evidently owing to the uniform obstruction of the pelvis in all its diameters, and, as we shall presently see, the great difficulty of effecting delivery by craniotomy in such cases has been already noticed by more than one author.

Within twenty-four hours symptoms of diffuse peritonitis came on, which resisted all treatment, and the patient sank

on the third day. Unfortunately no examination was permitted.

A comparison of the results following this complication will be more easily made by collecting the cases under different headings, according to the practice which was followed.

Thus, out of 57 cases we find that in 13 the labour was terminated by the natural powers alone. Of these 7 of the mothers recovered, and 6 died, *i. e.*, 46·1 per cent. In order that a case of this sort may terminate without assistance, it is evident that the tumour must either be very small or very compressible. Even in the latter case, however, before the child could be expelled, the tumour must have been subjected to an extreme degree of pressure and squeezing, so that its bulk might be sufficiently diminished to admit of the presenting part passing. This would, without doubt, be extremely apt to set up inflammatory action, and this may, perhaps, account for the unfavorable results which have followed cases left to nature alone. This has been already alluded to by Dr. Ashwell, who draws a comparison between cases in which tumours have long been subjected to contusion and cases of strangulated hernia,[1] and the cause of death in both is doubtless very similar.

In favorable contrast with these we have the cases in which the size of the tumour has been diminished by puncture. These are nine in number, in all of which the mothers recovered; six out of the nine children being also saved.

It has been laid down as a rule by Dr. Ramsbotham that before resorting to any other treatment, especially before contemplating the destruction of the child, an exploratory puncture should always be made with the view of evacuating contained fluid, and this rule is so evidently a correct one that I presume no one would hesitate to give their assent to it. Unfortunately, in a large proportion of cases, the tumours are semi-solid, and are not amenable to this treatment, which should, however, invariably be attempted, even when no fluctuation is apparent. Many of the recorded

[1] 'Guy's Hospital Reports,' vol. ii.

cases point to the importance of the latter precaution. The favorable results following puncture would seem also to point to an extension of this rule, viz. that the tumour should be punctured, even when it is of so small a size as not to preclude the possibility of delivery by the natural powers, so as to diminish as much as possible the pressure and contusion to which it is certain to be subjected. The mere puncture can of itself be attended with little risk, and, as the results seem to show, with far less than that which follows the flattening of the tumour between the head and the pelvic walls.

In five of the cases it was found possible to return the tumour above the pelvic brim, and in these also the termination was very favorable, all the mothers recovering. Failing puncture, therefore, this alternative should always be tried, and it will sometimes be found possible to dispose of the tumour in this way, even when it seems to be firmly wedged down in front of the presenting part, and is apparently hopelessly fixed in its unfavorable position.

As an illustration of the success which occasionally follows reposition, I may allude to a case, for an account of which I am indebted to Mr. Spencer Wells. In this instance a large, apparently solid growth, was found pushed down in front of the head, and occupying the space between the vagina and rectum. So large was it that the Cæsarean section was contemplated, but before resorting to that operation, Mr. Wells introduced his whole hand into the vagina, and pressing the mass firmly upwards, had the satisfaction of finding it disappear within the abdominal cavity, and delivery was then effected without further difficulty. This tumour, diagnosed at the time as ovarian, was afterwards found to be fibroid, but as an illustration of the results of this method of treatment it answers our purpose equally well.

An equally interesting case of the same nature is recorded in Dr. Beatty's 'Contributions to Medicine and Midwifery.'

In fifteen cases craniotomy was resorted to, four times after puncture had been made. In two of these cases the tumour was not sufficiently diminished in size by puncture to admit

of the passage of the child, but in the other two it is expressly stated that the tumour collapsed, and that perforation was only resorted to because the child was known to be dead; therefore, these two cases might fairly be left out of consideration in estimating the mortality of this treatment. I have, however, preferred to include them in the general results.

Out of these 15 cases 8 of the mothers recovered, and 7 died; that is, as nearly as possible, one half of the cases proved immediately fatal to the mother. Even in the cases that recovered it is expressly noted in several instances that the recovery was only imperfect, and that the ovarian tumour rapidly increased in size, and before long carried off the patient. As an instance of this take Case No. 5, related by Merriman, "Mrs. Cobb had a tedious and difficult recovery if, indeed, it could be termed a recovery. For many months she was confined to her room; afterwards she was just able to crawl about by the help of a stick, and the abdomen became tumefied and extremely tense. In the summer she went to the country, where I am informed exaggerated symptoms of ascites showed themselves. After an interval of several months she returned to town greatly emaciated and worn down by frequent exacerbations of hectic fever, and was at length released from her sufferings eighteen months after delivery." And such it is to be feared is only the ordinary course of events which we must expect in the majority of cases of recovery. The reason why the mortality after craniotomy is so great is evidently the same as that which gives rise to such unfavorable results when the case is left to nature alone, viz. the excessive contusion to which the tumour is necessarily subjected. Unlike most cases of bony deformity the diminution of the pelvic canal is not limited to one diameter, but the tumour generally obstructs all the measurements of the pelvis, the lateral as well as the antero-posterior; hence there is usually very great difficulty in performing the operation, and in breaking down the head sufficiently to admit of its passage. This difficulty is alluded to by several authors. I have already adverted to it as

occurring in my own case, and Dr. Merriman refers to one of his cases in the following terms: "It has been my lot to witness very many cases of delivery after perforating the cranium, but infinitely more difficulty was experienced in this than in any other which has occurred within my knowledge. This difficulty was attributable, I am fully persuaded, to the bulk of the tumour, and not to distortion of the pelvic bones."

Hence we see that in craniotomy performed on this account, the mortality to the mother, instead of being one in every five cases, which is about the average mortality of the operation in general, is, as nearly as possible, one in two, a result which is not very encouraging to those who have unhappily to resort to this distressing alternative.

But little need be said as to the other terminations of this complication. In four cases the cyst ruptured spontaneously, two of the mothers recovering, and there are cases which clearly ought to have been treated by puncture.

Twice the uterus ruptured before any attempt at delivery had been made. Turning was resorted to five times, four of the mothers dying, another proof of the great danger of extreme contusion of the tumour. The forceps were applied twice.

Lastly, in Mr. Berry's interesting case, No. 57 in our list, a sort of natural ovariotomy was performed, the tumour protruding through a laceration in the vagina, and being removed by ligature. This patient made a good recovery.

The question of the effect on labour of ovarian tumour which does not obstruct the pelvic canal is one of some interest, but I have not been able to collect a sufficient number of cases to throw much light on it. My impression is, that labour, as a rule, goes on favorably. With regard to the children the mortality was least when the tumour was punctured or pushed above the pelvic brim, and greatest when the delivery was left to the natural powers, a result we might expect when we consider the prolonged labour necessary to effect delivery in the latter class of cases.

Number.	Reference.	Position of tumour in pelvis.	Left to natural powers.	Punctured.	Embryotomy.	Pushed above brim.	Turning.	Forceps.	Rupture of uterus.	Results.		Remarks.
										Mother.	Child.	
1	Hewlett, 'Med.-Chir. Trans.,' vol. vi	Recto-vaginal pouch	1	.....	.....	.....	.....	.....	.....	D.	D.	Tumour flattened by pressure; extensively adherent.
2	Merriman, Ibid., vol. iii	Ditto	.....	.....	1	.....	.....	.....	.....	D.	D.	.....
3	Ibid., vol. x	Ditto	.....	1	1	.....	.....	.....	.....	R.	D.	Preceded by puncture.
4	Ditto	Ditto	.....	.....	.....	1	.....	.....	.....	R.	?	.....
5	Ditto	Ditto	.....	.....	1	.....	.....	.....	.....	R.	D.	.....
6	Ditto	Ditto	.....	1	1	.....	.....	.....	.....	D.	D.	Preceded by puncture.
7	Parks, Ibid., vol. ii	Ditto	1	.....	.....	.....	.....	.....	.....	R.	A.	.....
8	Ditto	Ditto	.....	1	.....	.....	.....	.....	.....	R.	A.	Same patient as No. 7.
9	Ditto	Ditto	.....	.....	.....	1	.....	.....	.....	R.	A.	.....
10	Ditto	Ditto	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
11	Ditto	Ditto	1	.....	.....	.....	.....	.....	.....	D.	.....	Ovarian origin somewhat doubtful.
12	Ditto	Ditto	.....	.....	1	.....	.....	.....	.....	D.	D.	
13	Lever, 'Guy's Hosp. Rep.,' 1842	Left side of pelvis	.....	.....	.....	1	.....	.....	.....	R.	A.	.....

14	Ditto	Ditto	.....	.....	.....	1	.....	.....	.....	R.	A.	.....
15	Ditto	Recto-vaginal pouch	.....	.....	.....	.....	.....	.....	.....	D.	D.	Cyst ruptured spontaneously.
16	Ditto	Left side of pelvis	1	.....	.....	.....	.....	.....	.....	R.	A.	.....
17	Ditto	Recto-vaginal pouch	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
18	Ingleby, 'Facts and Cases in Obstetrics'	Ditto	1	.....	.....	.....	.....	.....	.....	R.	?	.....
19	Ditto	Ditto	1	.....	.....	.....	.....	.....	.....	D.	?	.....
20	Ditto	Ditto	.....	1	1	.....	.....	.....	.....	R.	D.	Embryotomy on account of child's death.
21	Ditto	Ditto	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
22	Denman, vol. ii, p. 102	Ditto	.....	.....	1	.....	.....	.....	.....	D.	D.	.....
23	Ditto	Ditto	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
24	Jackson, 'Lond. Med. Rep.,' vol. ii	Ditto	.....	1	.....	.....	.....	.....	.....	R.	D.	.....
25	Behrend	?	.....	.....	1	.....	.....	.....	.....	R.	A.	.....
26	Beclard, 'Bullet. Land.,' No. 20	?	.....	1	.....	.....	1	.....	.....	D.	D.	Punctured, followed by version.
27	Meissner, 'Dict. de Med. et Chir.'	?	.....	.....	.....	.....	.....	.....	.....	R.	?	Cyst ruptured spontaneously.
28	Ditto	?	1	.....	.....	.....	.....	.....	.....	D.	D.	Arm presentation; spontaneous evolution.

Number.	Reference.	Position of tumour in pelvis.	Left to natural powers.	Punctured.	Embryotomy.	Pushed above brim.	Turning.	Forceps.	Rupture of uterus.	Results.		Remarks.
										Mother.	Child.	
29	Herbiniaux, 'Sur les Accouchements Laborieux'	?	1	.....	.....	.....	.....	.....	.....	R.	?	.....
30	Baudelocque, 'Traité de l'Accouchement'	Recto-vaginal pouch	.....	.....	.....	1	.....	.....	.....	D.	?	.....
31	Moreau, 'Nouveau Journ. de Med.,' 1820	Right side	.....	.....	.....	.....	1	.....	.....	R.	A.	.....
32	Stein ('Puchelt')	Ditto	.....	.....	1	1	.....	.....	.....	R.	D.	Perforation only on account of child's death.
33	Davis, 'Operative Midwifery'	Recto-vaginal pouch	1	.....	.....	.....	.....	.....	.....	R.	A.	.....
34	Ditto	Ditto	1	.....	.....	.....	.....	.....	.....	R.	D.	.....
35	Hufer, Grafe, and Walter, 'Journ. de Chir.'	Right side	.....	.....	.....	.....	1	.....	.....	D.	D.	Cases 35 to 40 inclusive were of malignant disease.
36	Schuzer ('Puchelt')	Left side	.....	.....	1	.....	.....	.....	.....	R.	D.	
37	J. G. Barc, 'Revue Med.,' vol. vii	?	1	.....	.....	.....	.....	.....	.....	D.	A.	
38	La Chappelle	?	.....	.....	.....	.....	1	.....	.....	D.	D.	
39	Greenhalgh, 'Guy's Hosp. Reports,' vol. i	Posteriorly and laterally	1	.....	.....	.....	.....	.....	.....	D.	D.	Spontaneous premature labour.
40	Ditto	Recto-vaginal pouch attached to bones	.....	.....	.....	.....	.....	.....	.....	D.	D.	Cæsarean section.

41	Ditto	Recto-vaginal pouch	.....	.....	.....	.....	.....	.....	.....	R.	A.	Premature labour induced.
42	Ditto	Ditto	1	.....	.....	.....	.....	.....	.....	R.	A.	Spontaneous premature labour.
43	La Chappelle	Ditto	.....	.....	.....	.....	1	.....	.....	D.	D.	.....
44	Perfect, vol. ii, p. 341	Ditto	.....	1	.....	.....	.....	.....	.....	R.	D.	.....
45	Lee's 'Clinical Midwifery,' Case 46	Ditto	.....	.....	.....	.....	.....	.....	1	D.	D.	.....
46	Ibid., Case 49	Ditto	.....	.....	1	.....	.....	.....	.....	D.	D.	.....
47	Ibid., Case 48	Ditto	.....	.....	1	.....	.....	.....	.....	R.	D.	Nature of case doubtful.
48	Ditto	Ditto	.....	.....	1	.....	.....	.....	.....	D.	D.	
49	Ward, 'Path. Trans.,' vol. vi	?	.....	.....	.....	.....	.....	.....	1	D.	D.	.....
50	Mr. Wooman, 'Lancet,' vol. ii, 1849	Recto-vaginal pouch	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
51	Headland, 'Lancet,' 1846	Ditto	.....	.....	.....	.....	.....	1	.....	D.	A.	.....
52	Ramsbotham, 'Obst. Med.,' p. 216	?	.....	.....	1	1	.....	.....	.....	R.	D.	Perforation after child's death; tumour had disappeared.
53	Ashwell, 'Guy's Hosp. Rep.,' No. 2	?	.....	.....	.....	.....	.....	.....	.....	?	?	Spontaneous rupture.
54	Langley, 'Lond. Med. and Surg. Journ.'	Right side	.....	.....	.....	.....	.....	.....	.....	R.	A.	Ditto.
55	Playfair	Recto-vaginal sept.	.....	.....	1	.....	.....	.....	.....	D.	D.	.....

Number.	Reference.	Position of tumour in pelvis.	Left to natural powers.	Punctured.	Embryotomy.	Pushed above brim.	Turning.	Forceps.	Rupture of uterus.	Results.		Remarks.
										Mother.	Child.	
56	Mr. Berry, 'Obst. Trans.'	?	.....	1	.....	.....	.....	.....	.....	R.	A.	.....
57	Ditto	.....	.....	.....	.....	.....	.....	1	.....	R.	D.	Laceration of vagina; tumour passed through and removed by ligature.

Table showing the results to Mother and Children of the various Methods of Treatment employed in fifty-seven cases of Labour complicated with Ovarian Tumour.

Total number of cases.	Position of tumour.			Left to natural powers.	Mothers.		Children.			Puncture of tumour.	Mothers		Children.			Pushed above brim.	Mothers.		Children.			Embryotomy.	Mothers.		Children.		
	Right side of pelvis.	Left side of pelvis.	Recto-vaginal septum.		Recovered.	Died.	Alive.	Dead.	Doubtful.		Recovered.	Died.	Alive.	Dead.	Doubtful.		Recovered.	Died.	Alive.	Dead.	Doubtful.		Recovered.	Died.	Alive.	Dead.	Doubtful.
57	4	4	37 The rest not specified	13	7	6	5	5	3	9	9	—	6	3	—	5	5	—	3	1	2	15	8	7	—	15	—

Cyst ruptured spontaneously.	Mothers.		Children.			Turning.	Mothers.		Children.			Forceps.	Mothers.		Children.			Rupture of uterus.	Mothers died.	Children dead.	Cæsarean section.	Mothers died.	Children dead.	Premature labour.	Mothers recovered.	Children alive.
	Recovered.	Died.	Alive.	Dead.	Doubtful.		Recovered.	Died.	Alive.	Dead.	Doubtful.		Recovered.	Died.	Alive.	Dead.	Doubtful.									
4	2	1 1?	—	1	3	5	1	4	1	4	—	2	1	1	1	1	—	2	2	2	1	1	1	1	1	1

Dr. Hicks considered that the use of chloroform in these cases was of great service by lessening the expulsive action of the uterus, which constituted one great obstruction to the return of the tumour.

Mr. Spencer Wells said that in the case alluded to in the paper, in which he had succeeded in pushing a tumour up from the pelvis into the abdomen, a trocar had been introduced by the vagina; and on his arrival he found the canula remaining in the tumour, but no fluid escaping. On making a freer opening, it became evident that the tumour was not ovarian, but a uterine fibroid. It was agreed that he should try to push it up before craniotomy or the Cæsarean section were discussed; and after the patient was well under the influence of chloroform, the tumour was pushed up without much difficulty, and the accoucheur then readily delivered the child.

Dr. Barnes thought the paper one of great interest. He thought one subject of importance had not been sufficiently discussed—that was, the propriety of inducing labour when pregnancy was complicated with ovarian tumour. It might be laid down as a general law, that nature would not tolerate the concurrent progress of these two conditions. Nature could hardly bear the simultaneous growth of two tumours like the pregnant uterus and an ovarian tumour. Something must give way. He had observed three orders of events, which all pointed to the truth of this law and to the practice he recommended. 1. He had seen the tumour burst and the patient die; and in another case he had seen the tumour rotated on its axis so that the pedicle was strangulated, leading to rupture of vessels, labour occurring prematurely under the agony of death: or the uterus may rupture. 2. He had seen repeatedly premature labour occur spontaneously with good result. 3. The distress in breathing and hectic induced may be so urgent as to compel the physician to interfere. He had frequently acted in obedience to this law, and with the best results. The indication seemed to be clear in all serious complications to pregnancy to reduce the case to its simplest expression by eliminating one of the elements of complication. The most fitting element to remove was the pregnancy. This done, the ovarian tumour could be dealt with at a convenient time according to its special circumstances. In reference to the remarks of Mr. Spencer Wells, he asked whether, in some of the cases in which tapping had been resorted to, premature labour did not set in all the same? It was certainly incorrect to say that the child was necessarily lost by inducing labour.

Dr. Murray said that in a case of pregnancy complicated with ovarian disease which had come under his care he had induced labour at the end of the eighth month, and, under chloroform, had delivered by means of the forceps. The child was living. This course he followed, fearing that the cyst might be ruptured

during the process of labour at the full time. His patient had been pregnant before, and it appeared that whilst pregnancy was going on the development of the cyst ceased, and it only enlarged after and between the pregnancies. He considered that operations of any kind, however simple, performed during pregnancy, tended to produce abortion or bring on premature delivery.

Mr. Spencer Wells said the question had several times come before him, in consultation on cases where an ovarian cyst complicated pregnancy, whether the patient should be left alone, or tapped, or premature labour be induced. He would be glad to learn from some of the accoucheurs present what they had observed in such cases, and he would say that the result of his own experience was strongly in favour of tapping. If the cyst were left alone, there was great risk that it might burst as the pregnancy advanced. He had known this to occur twice. He had repeatedly tapped ovarian cysts in pregnant women, and never saw anything unusual follow; and it appeared to him that inducing premature labour must be more hazardous to the mother than tapping a cyst, while certainly it injured if it did not destroy the child. In reply to Dr. Barnes's question, Mr. Wells said that he had only once seen labour speedily follow tapping, and in this case it was probably only a coincidence.

The President considered that if the contents of the tumour were fluid, tapping was preferable to the induction of premature labour.

Dr. Playfair said that, with reference to the question of premature labour mentioned by Dr. Barnes, in none of the cases he had collected was it stated that the child was born before the full period. He did not doubt, however, that premature labour frequently occurrred where ovarian tumour existed; but the child being small there would be little difficulty in the delivery, and, therefore, such cases had not been recorded. He believed that, as a rule, it was chiefly the smaller ovarian growths which were pushed down in front of the head. When the tumour was large it was more likely to remain within the abdomen, and would not be so likely to act as an obstruction. From this it resulted that such a complication would seldom be discovered until labour had actually commenced, and, therefore, there would be no opportunity for discussing the advisability of artificially inducing delivery.

JUNE 5TH, 1867.

Dr. JOHN HALL DAVIS, President, in the chair.

Present—45 Fellows and 11 visitors.

Messrs. B. Miller, Ford Bennet, and W. J. Pilcher, of Boston, were admitted Fellows of the Society.

The following gentlemen were elected Fellows of the Society:—Mr. W. Adams; Dr. A. Brown, Weymouth; Mr. Clarke, Mold; Dr. A. W. Ellis; Dr. J. Gittins, Brighton; Dr. Hadaway; Dr. Harris, Madras: Mr. Haviland, Bridgewater; Dr. Hickinbotham, Birmingham; Dr. H. G. Knaggs; Dr. La Fargue, Godalming; Mr. Langford; Mr. Leaf; Dr. Lithgow, Weymouth; Mr. Joseph Thompson, Nottingham; Mr. Thornton, Margate; Mr. Walters, Kingston; Dr. Llewellyn Williams, and Mr. E. F. Willoughby.

Dr. BRUNTON exhibited a placenta, the subject of extreme fatty degeneration. Parturition had occurred shortly after the end of the seventh month.

Dr. FREDERICK WEBB exhibited a specimen of hydatid degeneration of the ovum, which was discharged from a lady æt. 46, who had been pregnant eight times before, and had had six living children. The lady presumed that she had arrived at about the fifth month, when, after a long drive, violent pains, with very considerable hæmorrhage, ensued, and in three hours the mass was partly dragged and partly expelled from the uterus. During almost the whole of her

supposed pregnancy she had a bloody discharge, which occurred every few hours, and also the usual symptoms of pregnancy, enlarged breasts, sickness, &c.

Catamenia, from the birth of the last child, six years ago, have been regular. No fœtus existed, and the disease seemed to be confined to the villi of the chorion.

ON A NEW EXPANDING SPECULUM FOR OPERATIONS ON THE CERVIX UTERI.

By Robert Ellis,

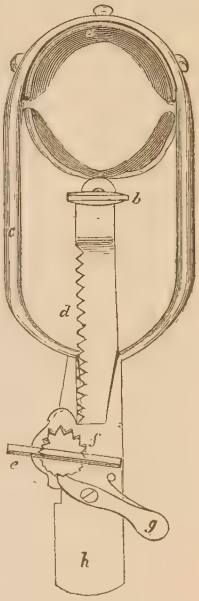
OBSTETRIC SURGEON TO THE CHELSEA AND BELGRAVE DISPENSARY.

I have for many years felt that all ordinary specula for the treatment of uterine disease were very defective in their construction, and opposed rather than assisted the operator. I do not refer to the simple matter of applying caustic substances to the cervix, but to the more difficult operations of incising the neck of the womb, or of exploring its cavity, or of treating the surgical diseases of the uterus proper through its canal. The fixed and unalterable character of the orifice of common specula, and their unwieldy length and too large diameter, constitute most serious defects in their construction.

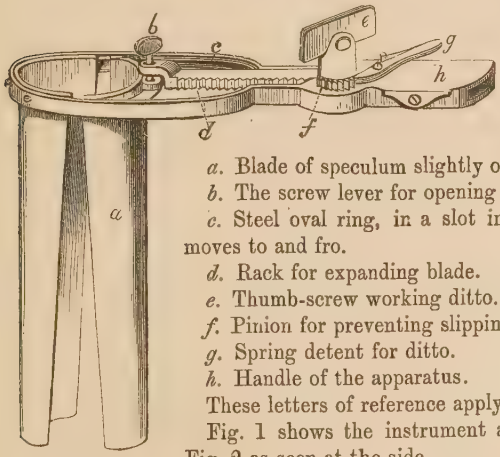
The instrument now exhibited before the Society, and which I have successfully used for a variety of difficult surgical proceedings in this region, does, I believe, obviate all the ordinary defects. It combines the advantages of the smaller with the capacity of the larger specula, and from its great simplicity and handiness in use I think it likely to prove a valuable addition to our obstetric apparatus.

It consists of a bivalve speculum with the ordinary screw adjustment, by which one of the blades is made to open; and as this part is independent of the rest of the mechanism, the speculum can be used as an ordinary instrument. The peculiarity of it consists in the power of expanding the mouth of

the speculum by a rack and pinion which withdraws one of the blades from the other. As this force acts in the direction of the perinæum—the extensible direction—it is possible to obtain an opening of the most capacious description without injury to the external parts. I do not say without pain, because in the sterile or unmarried any dilatation of the external parts is painful, and to be avoided unless absolutely necessary. But in those who have capacious vaginæ and a lax condition of the orifice it is surprising how large an opening can be obtained without much inconvenience.



The instrument, when in use, is inserted in the closed state, and is fitted with a plug, as in other specula. The valve is then expanded by the screw and the plug drops out. For all common purposes of applying caustics or dressing the os and cervix this expansion is sufficient. But if it be necessary to operate on the cervix either by incision or by



a. Blade of speculum slightly opened.
b. The screw lever for opening this blade.
c. Steel oval ring, in a slot in which the blade *a* moves to and fro.
d. Rack for expanding blade.
e. Thumb-screw working ditto.
f. Pinion for preventing slipping of blade.
g. Spring detent for ditto.
h. Handle of the apparatus.
These letters of reference apply to both woodcuts.
Fig. 1 shows the instrument as seen from above. Fig. 2 as seen at the side.

dilatation, or to introduce a sponge tent, then the rack is set in movement by the thumbscrew, and the blades are gently separated from each other. The pinion is provided with a spring detent, which holds it in place, and each click of which informs the operator how far this expansion is proceeding. A peculiar curve is given to the metal part in which the expanding blade runs, which renders its movement more regular and in the same plane with the opposing blade. The blades are four and a half inches long, and the diameter at the mouth of the speculum is one inch and a half, tapering to less than an inch at the end. The opening may be expanded to upwards of two inches and a half.

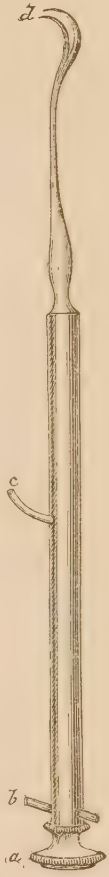
In actual service I have never made use of a more handy and valuable apparatus. It is well retained *in situ* in the vagina, and thus, by its immense powers of exposing this canal to view from one end to the other, it excels the duck-bill speculum, and dispenses with the necessity for an assistant. I can most strongly recommend this instrument to my fellow-practitioners, and I am happy to bear witness to the skill of Messrs. Mayer and Meltzer, who have constructed it from my designs.

ON A SELF-RETAINING TENACULUM FOR OPERATIONS ON THE CERVIX UTERI.

By Robert Ellis, Esq.

The great importance of fixing the cervix uteri for many of the operations performed upon it is fully understood by all obstetric surgeons. Even for the simple purpose of passing the uterine probe it will be found, if the cervix be steadily fixed with a tenaculum, that this often difficult operation is almost uniformly rendered possible, and even easy. In the more important proceedings of incision, dilatation, &c.,

it is absolutely necessary so to fix this movable organ as to ensure the accuracy of our performance. The tenaculum, however, occupies one of the operator's hands, and if he be unassisted it is extremely difficult to manage the speculum and the tenaculum in one hand while the other is engaged with another instrument.



I have for several years used a self-holding tenaculum, an improved form of which I now exhibit to the Society. It consists of a small double hook (*d*) of a peculiar curve attached to a slender handle formed of a steel tube. A longitudinal slot runs down the length of this handle, up and down which a blunt hook (*c*) travels by operation of an endless screw contained within the handle. This screw is moved by the milled head (*a*) at the end of the instrument, and the hook can thus be made to advance or recede at the will of the operator. The projecting piece (*b*) in the cut holds the moving parts securely in the handle. The double hook at the end is fixed just within the os into the posterior lip of the cervix, a proceeding scarcely felt by the patient, and by slipping the movable blunt hook down so as to catch over the mouth of the speculum the cervix can be fixed by simply turning the screw. It is possible to draw down the cervix in an extraordinary manner by this little apparatus, and if it be gently and skilfully used it will be found an invaluable assistant in all operations in this part of the body. This instrument and the last were both made from my designs by Messrs. Mayer and Meltzer, of 59, Great Portland Street.

CASE OF RETENTION IN UTERO OF THE GREATER PORTION OF A DEAD FŒTUS FOR A PERIOD OF FOUR YEARS.

(Reported by ALEXANDER HALLEY, M.D.)

(Communicated by Dr. HALL DAVIS.)

Mrs. H—, æt. 35, married, of strumous diathesis and phthisical family history, residing in the north of Ireland, had enjoyed good general health up to the time of her marriage, six years ago. The catamenia appeared when she was between sixteen and seventeen years of age, and for two years afterwards went on normally. After this she suffered from dysmenorrhœa with menorrhagia—not at every period but generally—the flow lasting from five to seven days, and in great quantity, as well as with much pain. Is not aware of any cause for the change from painless to painful discharge. During the intervals she was more or less subject to leucorrhœa.

She was married in January, 1860, at the age of twenty-nine, and miscarried three months afterwards. She suffered considerably from flooding, and kept her bed for eight days; after which she had return of hæmorrhage about every fortnight for four or five months, the discharge being rather light coloured, and without much pain.

In November following (1860) she again became pregnant, but for the first six weeks there was a constant sanguineous discharge, and she had to keep the sofa. In March, 1861, she quickened, and did not notice anything particular until about six weeks before her confinement, when she noticed a peculiar death-like smell about her, especially on removing her clothes at night; she did not, however, remark any particular change in her sensations.

In July she was delivered of a dead child, the placenta being atrophied and hardened like a wooden ball. For about six weeks after this she suffered from a thick yellow dis-

charge, but she never menstruated properly, yet she became pregnant again in the May following (1862). Her health and spirits now improved, and she came to London to see the Exhibition, and rather over-fatigued herself. She quickened at the end of August. After this she returned to Ireland, and again over-fatigued herself at the Giant's Causeway, and a few days afterwards on returning home noticed a coloured discharge as if she "was going to be poorly;" her breasts swelled very much, with great tenderness, so that for a few days she could not bear anything to touch them, and there was an appearance of milk. A brown discharge now came on, not in any great quantity nor particularly offensive, which lasted for a month; the membranes then broke, "the waters came away," and for about two months there was a daily discharge of masses of very offensive fleshy matters, with occasionally portions of bone. This was succeeded for about nine or ten months by a whitish discharge, slightly coloured and in greater quantity at the periods, but there was still no proper catamenial flow.

The discharge now again became very offensive, portions of bones (rib) from time to time coming away, and she suffered a good deal for about a year and a half from bearing down and weakness, especially at the periods.

Then followed a period of quiescence of about seven months, during which no discharge or bone of any size passed, but she has seen small gritty portions occasionally at the periods, although she has never been properly unwell since the first dead child was born in 1860.

During all this time her general health had suffered but little: her bowels had been constipated and irregular; the stomach readily getting out of order, and she is troubled with frequent micturition and headaches, but was always relieved by purgatives.

In May, 1863—when she was suffering from white discharge, but was under the impression that all the remains of the fœtus had passed—she consulted Dr. Churchill of Dublin, who examined her with the speculum, and advised the application of caustic. Two or three months after this, however,

a rib passed, the discharge became most offensive, and has continued so more or less ever since.

In March, 1866, she again came to London, and consulted Dr. Halley, who, on examination, found the uterus considerably anteverted, its body enlarged, globular, and hard, giving the impression that it contained a solid body, like a fœtal head; the neck of uterus was found shortened, and os slightly patulous.

On the 9th of the same month, Dr. Hall Davis, who was requested to see the patient in consultation with Dr. Halley, passed a large catheter into the uterus, and with an attached syringe washed out the womb with warm water, but only a little coloured discharge came away, with slight shreds clotted with blood. Dr. Davis proposed, and it was agreed, to dilate the os, and endeavour to remove the retained mass if possible. This proposal was communicated by Dr. Purdon, of Belfast, to Dr. Churchill, who had previously seen the patient in Ireland, and its having met with his approval, she returned to London on the 8th of May, and on the 10th the operation was commenced by placing the patient under chloroform. As the os and neck of the uterus were found rather unyielding, a laminaria tent was inserted for twenty-four hours; there was then a copious brown sanious offensive discharge, but as the os was still rather rigid a larger sponge tent was introduced, and retained for eight hours, at the end of which time the os had yielded sufficiently to allow Dr. Davis, who operated, to introduce his forefinger and a long pair of forceps: thus fifty-nine portions of bones were removed, and the uterus was well washed out with diluted Condy's fluid, as the discharge was most offensive. After this it was not thought prudent to do more till next morning's visit. In the meantime a tent was left in. At our next visit a small Barnes's dilator was substituted, inflated, and shortly after twenty-seven more osseous pieces were removed. Dr. Davis carefully re-examined the uterus, and found it to be completely empty, free from any remnants save a few gritty portions, apparently adherent to the mucous membrane, probably by effused lymph.

Each operation was preceded by chloroform inhalation, administered by Dr. Purdon. She was kept under its full influence the whole time of each manipulation. She suffered from no ill effects, save slight vomiting, after the first administration, when she had inadvertently eaten her luncheon just before.

On the 21st she felt a slight pricking within the vulva, and removed a very small portion of bone which caused it. She was well enough to leave London in a week's time, and she has since (up to this time, 1st February, 1867) continued in excellent health; the catamenia have been regular but scanty. She has not again been pregnant, nor has she suffered from any material discharge.

The preparation exhibited consists of the bones removed on the two occasions: fifty-nine on the first, twenty-seven on the second, and one since—eighty-seven in all.

CASE OF EXTRA-UTERINE FŒTATION TREATED BY ABDOMINAL SECTION; RECOVERY.

By J. Braxton Hicks, M.D., F.R.S.,

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Mrs. C—, about 26 years old, was attacked with a most severe form of peritonitis in the early part of January, 1867. I had seen her about four months and a half before; she was then suffering from irregular metrorrhagia and enlarged uterus, to which had succeeded some amenorrhœa. I then considered that she was suffering from an imperfect abortion. However, it appears that from that time till the attack of peritonitis there had been complete amenorrhœa, which, indeed, has continued up to the date of this report.

I saw her a month after the peritonitis. She had then

rather improved, but was still very ill. There was great distension of the abdomen with extreme tenderness, making examination difficult. Some of the enlargement was due to tympanitis, but in the left hypogastrium there was dulness with distinct fluctuation. On the *right* side also there was dulness reaching to rather the level of the umbilicus, extending over a space of about six inches diameter, reaching downwards towards the pelvis, and apparently continuous with the swelling on left hypogastrium. Upon pressure the fingers appeared to impinge on a solid firm body, after passing through fluid, but the pain it gave made examination difficult. Examination per vaginum showed a considerable bulging on the left side of the passage, the os uteri being displaced high up to the right side. The swelling on the left was not so firm as the uterus, but somewhat yielding on pressure.

Taking into account the history, with the fact that all had come on within five months and a half (in which period it would be exceedingly rare that any growth otherwise than one connected with conception could rise so high in the abdomen), I considered that it was most probably a case of extra-uterine fœtation. I saw her again about a week after during which interval she had materially become worse; more irritative fever; tongue tending to aphthæ, and pulse from 120 to 130. She mentioned that she had had a few days before very severe pain in the tumour of the right side, which had been relieved by a rather free diarrhœa. This tumour, instead of being dull, was now resonant on percussion; and the finger impinged readily through gas on to the solid beneath. The stratum of gas seemed about half an inch thick. Thus it appeared highly probable that communication had been set up with the intestine, and that putrid decomposition had arisen. I may here remark that she had the peculiar sweet so-called hepatic breath—a state I have always found co-existing with collections of putrid matter within the system. A week after this Dr. Oldham saw the case with me, and arrived at the same conclusion as to its nature which I had entertained. There was at this examina-

tion no resonance over the tumour, but fluctuation could be detected, and beneath this the solid body.

For the course of ten days she became still worse, the pulse varying between 120 and 140 per minute. Frequent vomiting, very little food taken. Constant diarrhœa, the evacuations exceedingly putrid; tongue glazed and dry; high nervous excitability, and hepatic breath. As it was not safe to leave her longer, and as she was importunate for relief, I determined to treat the case by abdominal section, provided that the examination under chloroform should not show any reason to the contrary.

This was accordingly done on 23rd February, 1867, Dr. Tanner, of Newington Causeway, Mr. Wood, and Dr. Phillips, being present and assisting. Chloroform was given, acting quickly and excellently. When she was well under its influence, a careful examination was made. I found the greater part of the fluid in the left hypogastrium had been absorbed, and in that situation was the uterus enlarged to the size of three or four months' pregnancy. It was tilted so as to carry the os to the opposite side of the vagina. The right side tumour could now be distinctly made out, reaching towards the pelvis but not touching the uterus, its upper border nearly in contact with the liver, and its innermost border nearly to the umbilicus.

Within it an irregular body was plainly felt, having strong resemblance to a small fœtus. The centre of this tumour was the seat of the principal pain throughout the latter part of the illness. I then made a small incision in a vertical direction over the centre of the tumour, about three inches from the umbilicus; progressing very carefully when near the peritoneum, which was found fully adherent. The cyst was then opened, and a quantity of very offensive gas escaped. On looking within I saw the fœtus. The opening was then enlarged to about two inches long, before doing which, however, I passed my finger into the cyst, to discover in what direction the cyst seemed to extend. By this means I found the adhesion of the cyst to the parietes did not extend more than one inch towards the umbilicus, and that I

had only by that distance on that side escaped the edge of adhesion.

I found the head of the fœtus at the opening, which was seized by a polypus forceps. The cranial bones easily separated, and this, though it gave a little trouble, was soon overcome, and the rest of the fœtus was removed. It was putrid and remarkably offensive. A few ribs had separated, and were taken out from the cyst. The placenta was found in the lower part of cyst, and deep down, strongly attached. This was therefore left to come away afterwards. The cyst was then washed out with a weak solution of permanganate of potash, and a loose wire suture put in in the centre of the opening to prevent too much gaping, the ends merely twisted so as to be capable of being separated. A large piece of linen saturated with Condy's solution was laid over the wound. The effect of chloroform passed off just as we had completed the operation. No vomiting whatever ensued. Nothing could have been more satisfactory than its action. She was under its influence about half an hour.

The operation was over about 3 p.m., and by night she had become more settled and tranquil; the pulse still very quick, and much offensive fluid escaped from the wound.

The next morning she was much improved, but a slight attack of diarrhœa of most offensive matter occurred, which was checked by an astringent, after allowing the bowels to free themselves of the residue of that which had escaped through the internal opening. We gave her half a grain of morphia, with a little nitric acid, and chlorate of potass.

The wound discharged freely. It was washed out with weak Condy's solution; small portions of placenta coming away. Some other portions easily reached were also removed by scissors.

This process was done every day till the whole placenta had come away, which took place in small portions up till the fifth, when the largest part escaped. A slight portion came also on the sixth, which ended the process of separation of the placenta. The offensive odour at that time almost ceased, and entirely so in a few more days.

By the sixth day pus was freely escaping from the wound, and its formation was fully established by the seventh day. The edges of the wound up to this period were unhealthy, and the skin, wherever the discharge had run, was blistered. On the eighth day I injected the cyst with nitric acid and opium lotion, and applied the same to the edges of the wound, which had the effect of causing a healthy appearance in a short time. A pad was placed on the flank, with a bandage round the abdomen, to compress the walls of the cyst, and to facilitate the expulsion of the secretions.

Pus was freely poured out till about the end of fourth week, when the quantity gradually diminished, and by the end of the sixth week had ceased, it being evident that the walls of the cyst had become obliterated by adhesion.

No gas escaped from the cyst after the third day.

The bowels were inactive from the second day, succeeding the operation for twelve days, when they were encouraged to act by water enemas. Considerable quantity of solid fæces came away with some annoyance, after which there was no trouble in this respect.

From the day after the operation her general condition rapidly improved without any material drawback. The vomiting entirely and immediately ceased. She took solid meat on the third day, and every day after, with plentiful supply of other nourishments. At first six glasses of port wine were daily taken, being necessary to keep her from fainting. About a week after the secretion of pus had been completely established, she was able to reduce the stimulants, till at the end of the fifth week she took one or two glasses daily, and some ale. The tongue assumed its natural appearance in about two weeks. The pulse remained small and quick for four weeks.

The peculiar odour of breath ceased about the end of the first week. Urine was passed in large quantities, and pale in colour. She was taken out of bed on a stretcher on tenth day to have the bed made.

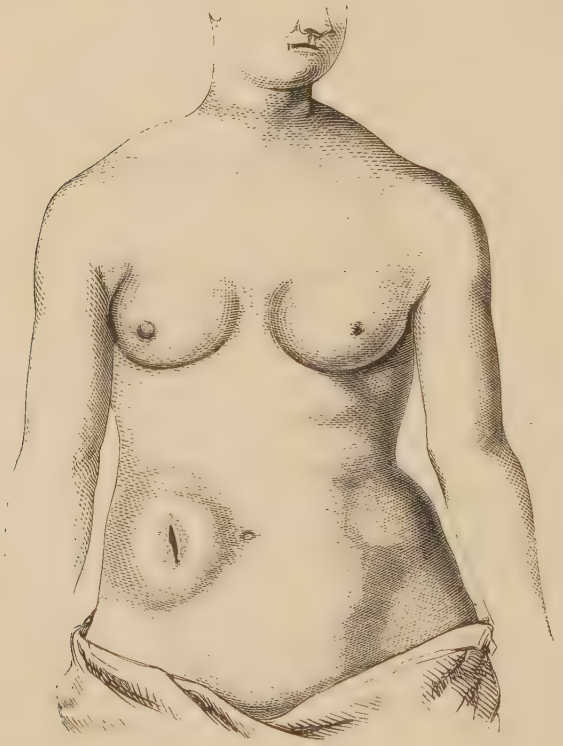
Her spirits were excellent, coupled with extreme nervous susceptibility, which at first could only be controlled by large

doses of morphia, which had to be continued in smaller quantities for some weeks after.

There was, at about three weeks after the operation, some inflammation of the veins of the left leg and some œdema of it, but this soon subsided.

She has now quite regained her natural appearance, and has been out of doors walking. The recovery thus, it may be seen, has been excellent throughout.

The drawings of the fœtus, and the position of the cyst in the abdomen, now handed round, were kindly made for me by Mr. Wood who assisted in the case.



Remarks.—Without occupying the time of the Society with an analysis of the whole case, there is one point to which I should like to call attention.

Whatever may be the doubts of any one as to the propriety of removing the fœtus before its death, in the cases of extra-

uterine pregnancy, I think it will be conceded that where communication has taken place with the intestines so as to cause rapid decomposition of the fœtus and absorption of putrid matter, we ought in every case to make an attempt to save the patient, for it will, I think, be found that generally there is less likelihood that pointing takes place through the parietes, and the patient more quickly sinks under the irritation, than in cases where no communication exists. Under these circumstances it is all important that we should be able to say whether adhesion of the cyst to the abdominal wall has taken place, and if it have, at what spot. We might be inclined at once to say that with this great source of irritation we should certainly expect to find ample adhesion everywhere, and most probably to the parietes. This it might be thought still more likely to be the case after the lapse of a month after the communication. This was certainly the condition in the case just read, but in one of my other cases related in Guy's Hospital Reports[1] it was found that although communication had existed some time, there was but a very limited adhesion of the fœtal membranes to the parietes, and no adventitious cyst around it within a considerable distance of this parietal attachment. To expect recovery after the removal of a putrid fœtus by abdominal section, where the peritoneum was exposed, would be contrary to experience in abdominal surgery. From what I have noticed in the three cases in which I have removed the fœtus by this mode we may probably make tolerably sure of securing the point of adhesion by strict attention to the spot of most severe tenderness on pressure. If we make a small opening first of all at this point we shall generally be safe if we cautiously pass the finger first of all to feel from within for evidence of adhesion, after which the wound can be enlarged. Should we approach the position of any artery of the parietes it is better to run the chance of dividing it than of exposing the peritoneum.

Another point of importance is the size of the opening.

[1] "On two cases of Extra-Uterine Fœtation treated by Abdominal Section," 'Guy's Hospital Reports,' 1862, p. 127.

This, so far as regards the risk of opening the peritoneal cavity, has been considered, but it is important also in regard to the chance of hernia afterwards. This, as is well known after ovarian operations, is a matter not to be ignored, and therefore the smaller the opening we make the better. For this reason it would be well, if the cyst be tolerably strong, rather to remove the fœtus piecemeal, of course carefully, than to attempt to drag it through whole; or to enlarge the wound to a size which may risk the opening the peritoneal cavity. These remarks are of special importance if the fœtus be full grown.

I presume also that it is now admitted that it should be our rule to leave the placenta to come away gradually, and not to attempt to remove it at the time of the operation; its attachment is generally very firm, and where we leave a free opening for discharges and for washing out the cyst, the decomposition of it within is not of such extreme importance as to induce us to chance laceration of the cyst-wall by attempts at removal. This case proves the value of this rule.

Mr. Philip Harper fully agreed in the high value and importance of the case which had just been recorded. Speaking generally, he thought we might, as regards operative treatment, divide these cases into two classes. One class would include those cases in which there were more or less severe attacks of peritonitis, producing adhesions to the abdominal walls and other surrounding parts, and in which, should the woman survive, there is an effort made to get rid of the fœtus by suppuration. The other class included those cases where the fœtus escaped suddenly, producing fatal hæmorrhage or fatal peritonitis. The case which had just been read, and others by the same author, belonged to the first class, and Mr. Harper considered that there could be no doubt that opening the sac formed by peritoneal adhesions was a safe and philosophical plan of treatment, and one always to be adopted when feasible; but he would go further, and inquire whether we should not extend this line of practice to the second class of cases, and open the abdomen freely in those cases in which there was no doubt that the fœtus was not contained in the uterus, and where the woman was liable to rapid death at any moment, and not wait for peritonitis to produce adhesions. In

conclusion, Mr. Harper referred to the knowledge that had been acquired during the last few years of the means of arresting hæmorrhage in the abdominal cavity as being of much importance in reference to cases of extra-uterine fœtation.

After some remarks by the PRESIDENT and Dr. GREENHALGH, Dr. HICKS, while thanking the Society for their kind reception of his paper, yet felt unable to coincide with the views expressed by some of the speakers. He thought that if the records of the cases of extra-uterine fœtation were observed (and there were many now accumulating in the 'Transactions'), it would be seen how very full of danger it would be to attempt to remove the fœtus by abdominal incision before the cyst was adherent to the parietes. The attachment of the placenta was so delicate and so awkwardly placed that attempts to remove it would produce uncontrollable hæmorrhage. Dr. Hicks therefore thought it necessary to urge extreme caution in attempting to remove the fœtus by abdominal section before we were urged to do so by the severity of the symptoms.

CASES AND REMARKS ILLUSTRATING THE HISTORY OF PREGNANCY COMPLICATED WITH SMALLPOX.

By ROBERT BARNES, M.D., F.R.C.P.,

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THE Society will, perhaps, remember that, in the remarks which I had the honour of addressing to the Fellows on retiring from the Presidentship, I expressed a wish that we should gather up our experience as to the course of pregnancies complicated with zymotic disease. I am sure no one can have observed and reflected upon even a small number of such cases without being struck with the number of questions of scientific and practical interest to which they give rise. To solve these questions, a large body of facts observed by different men, in different localities, and under other varieties of circumstances, is necessary. And it

cannot be doubted that the practice of the Fellows of our Society can supply such a body of facts. All that is wanted is that each should look over his case-books, and send in reports of cases in point; comparison and generalisation may then be usefully applied.

There is no disease, excepting, perhaps, syphilis, which has so many interesting bearings upon pregnancy as smallpox. In 1863-64-65 smallpox prevailed rather extensively in London; and in pursuance of my own suggestion I beg permission to relate the four cases which came under my observation.

August 3rd, 1863.—I was requested by Dr. Simpson, of Fore Street, to see a woman who had contracted smallpox when near the end of pregnancy. She had had several children, and had been vaccinated.

Rash came out on the 1st; she was delirious. On the 2nd, at night, she attempted to destroy herself. Pending our appointment, labour came on suddenly, after having taken an aperient dose. The child was born very quickly, alive, strong. No hæmorrhage. The mother had been better since delivery; pulse 100; respiration hurried. She did well. On suggesting to Dr. Simpson that he should vaccinate the child immediately, he said he had vaccinated two children born prematurely of mothers suffering under variola, but confluent variola broke out, although the vaccine vesicles came out well.

January 16th, 1864.—I saw the wife of a publican with Mr. Jenkins. She had usually enjoyed good health, and had borne three children. When Mrs. —— was pregnant, an inmate of her house had smallpox. She took it subsequently, and was delivered spontaneously of a living child, when supposed to be seven months gone. The eruption was just appearing; she had vomited, and had fever. The child did not seem of more than six months' development, and scarcely appeared viable. I saw the patient two hours after delivery. The placenta had come away without hæmorrhage. The pulse was quick, bounding; skin hot. A favorable prognosis was given. She had salines and anodynes.

I was informed by Mr. Jenkins that she was afterwards very ill, but recovered. The child showed no mark of variola.

On the 20th November, 1865, I met Mr. Jackson at Canonbury, in the case of Mrs. ——, who was in the last month of her first pregnancy. Modified variola had appeared some days. She expected labour at the end of November. It therefore seemed to have set in a little prematurely. The head descended into the pelvis, and then stopped, pains being ineffective; I found the body covered with discrete varioloid vesicles, not umbilicated. The head was near the perinæum in the second or right occipito-anterior position. We gave chloroform. The patient was at first excited by the chloroform, and we had to place her on her back. I then applied my long forceps, and delivered. The cord was twice round the child's neck, involving some danger of strangulation. The cord was cut whilst held between both hands, and then the ends were tied after releasing the neck. The child, a girl, cried and did well. The placenta was expelled. I have since been informed by Mr. Jackson that the mother did well; but that the child was attacked with variola either on the fifth or sixth day, and died.

The *first* question that arises is as to the *influence of intercurrent smallpox upon the pregnancy*. Does it interrupt the course of pregnancy? In the three cases related labour came on prematurely.

2. *In what way does smallpox excite premature labour?* It has been thought that labour was the ulterior result of the death of the embryo; and it is certain that in some cases the death of the embryo is really the first step or apparent factor. But in my three cases—as in a host of others—the child was born alive. The action, then, of the morbid poison is not always primarily upon the embryo. I venture to submit the following propositions:

a. Nature hardly tolerates the concurrent progress of an active disease and pregnancy. This law is of very wide application.

b. If the disease be of zymotic character, the morbid

poison, aggravated by the further blood-poisoning resulting from arrested or disordered secretory function—so important in pregnancy—acts upon the whole system, producing fever, increasing the irritability of the nervous system, impeding the nutrition of the muscular system, including the most important muscle of all, the uterus, and directly irritating this muscle. The influence of blood poor in oxygen and loaded with carbonic acid, in causing contraction of the involuntary muscles, has been well established by Marshall Hall, Brown-Séquard, and others. It is a matter of experience that pregnant women suffering from asphyxia, chronic or acute, are extremely apt to abort. The blood in fever wants oxygenation. In this respect it resembles the blood in asphyxia. But superadded to this condition are the materies morbi, and other consequent blood impurities, which it is probable act in a similar manner upon involuntary muscle. The result is that the uterus is directly stimulated to contract, and labour is induced.

c. There appears to be this difference between the action of acute and chronic blood-poisoning upon the embryo and pregnancy: in acute disease, where respiration is impeded and where the blood is rapidly poisoned, the first effect is upon the uterus. In chronic poisoning, as in the case of secondary syphilis, the embryo may be first attacked. Its nutrition is sapped, it perishes, and then, the uterine development being arrested, and involution taking its place, in the course of a period ranging from seven to twenty-one days contraction sets in, and the dead fœtus is expelled.

d. There is another way in which it is probable that abortion is produced in zymotic diseases. The blood is in a state favorable to extravasation. Apoplexy of the placenta or effusions between the placenta and the uterus take place, and thus uterine contraction is excited.

e. Abortion, or premature labour, may be excited in yet another way. The sudden impression upon the nervous system, or shock, may cause the uterus to expel its contents. I have seen this happen under the influence of an attack of apoplexy, and it is at least a principal factor in the causation

of labour when uræmic convulsions break out during pregnancy.

3. *To what extent is the life of the mother endangered?* In the three cases related the mothers recovered, but I have seen another case, the notes of which I have been unable to find, which terminated fatally, and in which a post-mortem examination was made. It is in the highest degree probable that the fatality is much greater in the case of pure variola, that is, where variola attacks unvaccinated persons. Experience in these cases has become rare. For information as to the effects of pure variola we must go back to the medical history of the early part of the century; and for want greatly of such a society as ours at that time the records are very scanty. I will not examine these records now. It is enough to observe that pregnant women not infrequently pass through pure variola in safety. Still variola, pure or modified, must be looked upon as a dangerous complication. I am inclined, however, to think it is less dangerous than typhus or typhoid. It does not appear that there was any excessive loss of blood during labour in the cases here related.

The chief danger probably arises in the puerperal state.

4. *What is the influence upon the child?* The following facts appear to be established:

a. If the pregnancy is not interrupted, and the child is born alive at term, it will probably have gone through the disease. Evidence of this is found in the following cases:

1. Some years ago a child, aged 14 months, came under my care. The mother, when six months pregnant, took smallpox; she was delirious. She had been vaccinated, and bore the marks. The pregnancy did not seem to have been disturbed. The child exhibited scars, with which she was born—one on the back, another on the scalp, others on the legs. She had never been vaccinated, three medical men having considered the operation as useless.

2. In the 'Philosophical Transactions,' vol. xlvi, is this case. A woman big with child, having herself long ago had variola, nursed a maid servant with the disease. At the proper time she brought forth a healthy female child, in

whose skin Dr. Watson discovered evident marks of variola. Dr. W. pronounced that the child would be free from future infection. After four years her brother was inoculated at the same time as herself with pus from the same patient. The boy had the regular eruption. The girl's arm did not inflame or suppurate. On the tenth day she turned pale suddenly, was languid for two days, and then was well.

3. Dr. Jenner relates a case told him by Mr. Henry Gervis, a surgeon at Ashburton, the grandfather, I believe, of our honorary secretary. Mr. G. vaccinated a pregnant woman in her last month, variola prevailing in the village, and her three children having been inoculated with variolous matter the day before. She went through the vaccine disease, and was delivered of a female child presenting an eruption resembling variola in an early stage. This was five weeks after the mother's vaccination, and four weeks after her exposure to the variolous infection of her own children. Mr. G. inoculated successfully with pus taken from the infant's pustules.

4. John Hunter relates a similar case. On the other hand, William Hunter said in other cases of the kind the child in utero escaped contagion; and Sir George Baker mentions the case of two women who were inoculated when pregnant at Hertford. Both had the smallpox favorably, and brought forth children perfectly healthy. Both these children at the age of three were inoculated with effect.

5. This practical question arises, Can we, by inducing labour in a pregnant woman attacked with smallpox, increase the chances of safety of the child? The facts established above must govern the decision.

a. It is highly probable, in the first place, that, in the course of the disease, labour will occur spontaneously.

b. If not, the child may perish with the mother.

c. It may perish independently in utero.

d. It may take the disease and survive.

e. It may not take the disease in utero, but be born while susceptible to the infection, whilst the mother is still suffering from the disease. In such a case is immediate vaccination

desirable? If this be answered in the affirmative, as I believe it ought to be, then is it desirable in cases where labour has not occurred spontaneously to induce it, in order to secure the opportunity of vaccinating the infant before it has become infected? Would this course be attended with any advantage or disadvantage to the mother? No absolute rule can, I think, be laid down, but the condition of the mother, the mildness of the disease, will in some cases indicate the propriety of not interfering. But as a general rule I am disposed to conclude that labour should be provoked at an early stage by introducing a flexible bougie into the uterus.

Mr. Benson Baker had had seven cases of pregnant women under his care during the past winter who had taken smallpox and miscarried; they were all delivered of living children, but with one exception all the children died. None of the children had variola when born, but a modified or abortive eruption came out within from three to eight days after birth. He could not but think that the effect of variola on the unimpregnated uterus might aid in elucidating some of the interesting and important suggestions of Dr. Barnes. He had observed cases in which amenorrhœa had existed for several years, and under the influence of variola an excessive menstrual flow had occurred; and others in which young girls from ten years of age and upwards, who had never menstruated, had done so on the eruption of smallpox. And lastly, he referred to other cases in which the catamenia had been established by the variola, but in which the amenorrhœic condition subsequently returned.

Mr. Streeter, as a visitor, would avail himself of the president's invitation to take part in the discussion, having long taken an interest in this subject. He had himself read a paper upon it before the Westminster Medical Society nearly thirty years ago, and in that paper, he believed, was contained the earliest recorded case in this country of smallpox after vaccination occurring with pregnancy. Referring for details of his case to the printed record ('The Lancet,' Nos. 751 and 757), he would only now state some of his conclusions, regretting that so little had been added to our knowledge of this complication since that time. One important point then shown was, that the child did not pass through the disease at the same time as the mother, but had it eight or ten days later at least. As the fœtus formed its own blood from absorbed material, so it incubated its own zymotic poison, and failed with the disease later than its parent. Hence,

when born during the primary or eruptive fever of the mother, it had no eruption; and it was not until after her secondary or maturating fever was nearly or quite over that the child could exhibit pock marks at birth, and if so it was usually dead. Another point of interest was, whether children born after their parents had survived attacks of smallpox after vaccination would be susceptible of the vaccine. In two children so born he failed to produce any vesicles from punctures made the day after their birth, but in the last one he succeeded some months after in producing a regular vesicle with characteristic induration and areola. The complication of natural smallpox was far more dangerous than that of variola after vaccination. Of this he had seen only one case; in this the eruption was confluent, and the woman died undelivered. Mr. Streeter also advocated revaccination after puberty, because, as smallpox may occur twice, so may smallpox occur after vaccination; and in conclusion, he referred to one especial danger of smallpox in the female—this occurrence, namely, of profuse menstruation during the eruptive fever, leading to prostration and a recession of the eruption.

Dr. Madge said that the third volume of the Society's 'Transactions' contained a short paper by him on a case of smallpox in twin-fœtuses, and in the remarks appended to that case he believed he had anticipated a good deal that had been said in this discussion. At present the subject was perhaps more of a theoretical than a practical one. In the paper referred to, however, he had made what he believed was a novel suggestion, and which he would now repeat—namely, the necessity or advisability of recommending all pregnant women during epidemics of smallpox to be vaccinated or revaccinated, so as to extend the protective influence of vaccination through the blood of the mother to the child in utero.

Dr. Barnes, in answer to Dr. Madge, thought that it might be desirable to revaccinate pregnant women who were specially exposed to infection during an epidemic, but that as a general rule it was not called for.

CASE OF VARIOLA IN THE FIFTH MONTH, WITH CONSEQUENT DELIVERY AT FULL TERM OF A DEAD CHILD.

(Reported by C. W. Milne.)

(Communicated by Dr. Barnes.)

Anne Batchelor, of James Street, Lambeth Walk, was taken ill on the 6th of July, 1866, with pains in back, limbs, head, and intense sickness. On the 9th I saw her as a private patient, when the eruption was becoming visible; after that she went on very favorably, having a very mild form of the disease, and in about a fortnight she got, I may say, quite well. From the condition she was in I predicted a miscarriage, but none took place, and I did not see or hear from her until the middle of September, when she had a slight show of a bright red colour, free from any offensive odour. From this time she went on having a slight show and no pains, in fact, feeling quite well from day to day, expecting her labour to come on. This did not take place until the 7th of October; she had been ill all night when I was called to see her in the morning. Her labour was natural but slow, and about it there was nothing unusual. The fœtus was dead, and the cuticle had begun to desquamate, but it was not putrid, simply general lividity of the surface. The placenta came away easily; it was of an unusual size, large, pale, and very friable, in fact, it had something of a lilac tint. The fœtus was well developed, small, and I thought must have been alive at the eighth month; it evidently had had small-pox, for it was covered with hard crusts of a whitey-brown colour. The woman made a good recovery and has since enjoyed very good health.

JULY 3RD, 1867.

DR. HALL DAVIS, President, in the Chair.

Present—42 Fellows and 5 visitors.

The following gentlemen were elected Fellows: Dr. Cuolahan; Mr. C. C. Fuller; Dr. Mickley (Nottingham); Dr. Pearce (Leicester); Dr. Heywood Smith; and Mr. Evan Williams.

Admitted.—Dr. Hadaway; Mr. Wasdale Watson; Mr. Haviland; Dr. Edis; Dr. Naggs; Mr. E. F. Willoughby; and Dr. G. R. Sheraton.

Admitted, on having forwarded obligation paper signed.—Mr. W. H. Thornton, of Margate; Mr. Jos. Thompson, Jun., of Nottingham; Dr. Lithgow, of Weymouth; Mr. Charles Neate, of Weobley; and Dr. Hickinbotham, of Birmingham.

Dr. MEADOWS exhibited an Ecraseur made by Messrs. Weiss, the principal features being (1) The single steel wire in place of the chain or wire rope; (2) A wheel at the end of the instrument for the wire to roll over; (3) A kind of windlass worked by an endless screw, around which the wire coiled as it was drawn in. The advantages claimed for it were, great power, strength, and facility in working.

Dr. SHERATON exhibited an improved Tire-Tête, or com-

bined Perforator and Extractor. The instrument consisted of a spear-headed perforator formed by two blades, which were capable of separation to a limited extent, and presenting two claws which, after the head was opened, might be fixed into the interior of the cranial bones, and so enable traction to be made. The length of the instrument was about ten inches.

Dr. Meadows and Dr. Graily Hewitt feared that the use of the instrument would be attended with considerable danger.

Dr. Meadows exhibited a specimen of Monstrosity, which was born at term and lived for a few minutes. It was perfectly formed as regards its upper half, but in place of the lower extremities there was a sort of caudal appendage, which moved backwards and forwards as if by a hinge-joint. There was no anal orifice nor any external genital apparatus.

Dr. Meadows and Dr. Bannister (in whose practice it occurred) were requested to furnish a detailed report on the specimen.

REPORT ON THE ABOVE SPECIMEN OF MONSTROSITY.

By Alfred Meadows, M.D., and Alfred J. Bannister, M.D.

The general appearance of the fœtus from the head downwards to the point of insertion of the funis was that of a healthy child, at about the full term of utero-gestation. Below this point the two lower extremities were merged into a sort of caudal appendage, as is shown in fig. 1. It was conical in shape, curved slightly forwards, and articulated with the trunk of the child by a joint, which admitted of movement only or principally in the antero-posterior direction. At about an inch and a half from its extremity was another

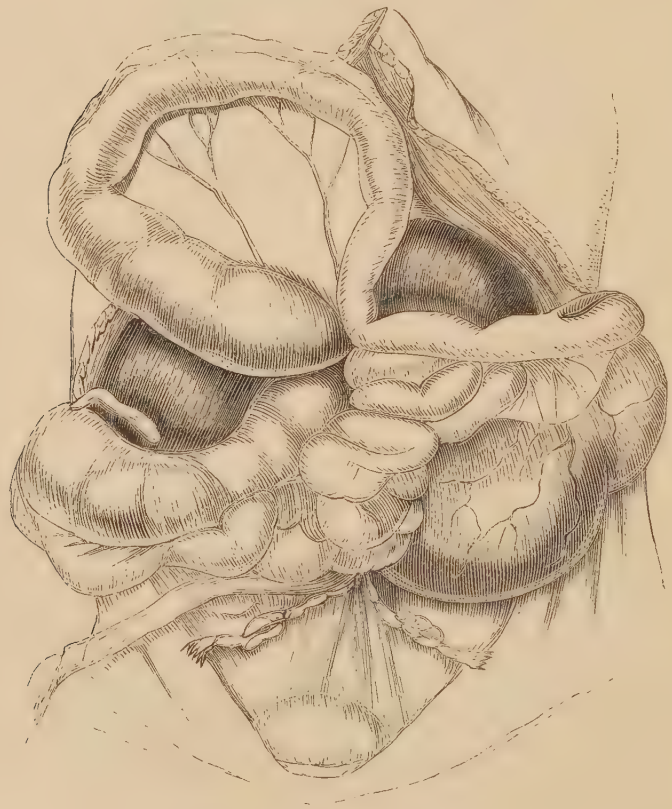
Fig. 1.

hinge-like joint, allowing of similar though more restricted movements. There were no external generative organs, or any indication of them, and therefore no opinion could be formed as to the sex of the child from outward appearances. Neither was there any anal orifice, nor appearance of urinary apparatus.

On exposing the abdominal contents it was observed that the large intestine ended abruptly at the sigmoid flexure, above which there was very considerable distension from accumulation of the meconium. The rest of the intestine was healthy, as were also all the other digestive organs. The

spleen was normal; the kidneys were absent, together with their supra-renal capsules, the ureters, and bladder. The generative organs consisted of two small oval bodies, about the size of a pea, situated one on either side of what may be called, though it was not in reality, the pelvis. These two were connected together by a small band of thickened tissue extending across from side to side, and may have been either rudimentary uterus, or Fallopian tube,—probably the latter, inasmuch as it was continued beyond the supposed ovary on each side, and ended there in what seemed to be a fimbriated extremity. All these points are represented in fig. 2. There was no proper pelvic brim or cavity, but the floor

Fig. 2.



of the abdominal cavity was formed by the joint, by which the lower extremity or caudal appendage was articulated with the trunk. There were small openings or foramina on either side, through which the blood-vessels and nerves passed from the abdomen to supply the parts below. The abdominal aorta divided into what may be called the two common iliacs, which passed through the openings just mentioned, and then split up into branches to the several muscles of the lower limb. The nerves passed through in two main trunks, and these were similarly disposed of.

All the thoracic and other viscera were normal and healthy.

Fig. 3.

Fig. 3 represents the front view of the bones of the lower extremity and pelvis, from which it is seen that the two iliac bones were fused into one. There was no sacrum, and in place of the pelvic outlet there was a sort of oval ball and socket joint, which, however, was so shaped as to admit of little more than a hinge-like movement with the one bone, shaped below something like a femur, which formed the principal part of this extremity. Over what may be regarded as the transformed knee-joint were two patellæ, one on each side, or condyle of the femur, and the whole was terminated by a small conical hook-shaped bone, about an inch in length, which articulated with the larger bone by a sort of hinge joint.

HEREDITARY CONVULSIONS CONFINED TO THE MALES OF A FAMILY, OCCURRING DURING INFANCY, AND AT ABOUT THE EIGHTH MONTH OF INTRO-UTERINE LIFE.

By J. B. Curgenven, M.R.C.S. Eng., &c.

Mrs. N— states that she has had nine children born alive at the full period,—five girls and four boys. Two of the girls were twins; they died within five days after birth, of marasmus; two other girls died during childhood, one of scarlet fever, the other of measles. One girl is living and healthy. *None of the girls had convulsions.* Of the four boys, two died of convulsions in infancy, the other two are living and healthy, but during infancy and teething they suffered very much from convulsions. In the last four pregnancies the fœtus died about the eighth month, and, judging from the sensations of the mother immediately preceding the death, it is evident they all died of convulsions. *They were all males.* Speaking of the last, she says that the child was scarcely ever still; the movements commenced very early and were always strong. Immediately preceding its death she

was sitting quietly on the sofa, when the movements became very violent, *and ended with a sudden plunge.* She became almost faint and insensible and said that if she had been standing she must have fallen. During the three previous pregnancies the fœtus died suddenly in a somewhat similar manner at about the eighth month.

Her mother had eleven children, of whom three boys and four girls died of convulsions at from three to fourteen months of age; two boys lived but suffered from frequent attacks of convulsions; two girls lived to grow up *without convulsions,* one being the mother of the above family, Mrs. N—. The parents of these two families were strong and healthy persons.

I bring this history before the Society, not only on account of its rarity of occurrence, but on account also of the strong conviction on the part of many members of the profession, that convulsions are *only* due to gastric, dental, and other eccentric irritation, and most if not all writers on this disease support their view. Convulsions then may occur from an idiopathic eccentric cause, and this eccentric predisposition to the disease may be easily excited by an eccentric cause, such as gastric or dental irritation.

THE SALIVATION OF PREGNANCY SUCCESSFULLY TREATED—WITH A CASE.

By Thomas Skinner, M.D.,

OBSTETRIC PHYSICIAN TO THE LYING-IN HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, LIVERPOOL.

Case.—*The History, &c.*—Bessie Reid, æt. 24, married, and three and a half months pregnant of her first child, consulted me at the Dispensary for the Diseases of Women and Children in connection with the Lying-in Hospital, on 4th March last. She told me that she had been suffering for some months from sickness and sometimes vomiting, which

came on every day an hour after meals. It generally occurred suddenly and like as if it was a spasm. Soon after these symptoms first appeared, profuse salivation set in, and it tormented her night and day, depriving her of sleep, but the time at which she was worst was the after part of the day. She calculates that between the hour of 2 o'clock and bedtime, she daily lost from one to two quarts of saliva, and on retiring to bed she had to provide herself with several towels to be laid on her pillow in order to receive the fluid which escaped from her mouth whether she slept or remained awake. When she first applied to me at the dispensary she was provided with three pocket-handkerchiefs, all of which had become saturated to overflowing, as it was running down her dress whilst waiting her turn to be seen. When I prescribed for her I told her that I did not suppose I could be of any use to her and that most likely she would have to suffer the terrible annoyance until it ceased of its own accord, which might be at the quickening or at any time between that and delivery. Having succeeded in curing her after delivering such a prognosis, it is evident that neither faith, nor hope, nor any emotional element can be allowed to lay claim to any share of the credit.

I prescribed as follows:—

℞ Aluminis Sulphatis, ʒiss;
Magnesiæ Sulphatis, ʒiij;
Acidi Sulphurici Diluti, ʒiij;
Tr. Opii, ʒss;
Misturæ Formyli Concent., ad ℥vj.

A dessertspoonful to be taken thrice daily after food in a wineglassful of water.

(As the last ingredient in the mixture is a formula of my own I may just state that it is composed of one fluid drachm of chloroform briskly agitated with a pint of spring water until the globules of chloroform entirely disappear.)

In each dose of the mixture the proportions of the various ingredients are as nearly as possible:—Alum, 3¾ grains; Epsom salts, 7 grains; dilute sulphuric acid, 7 minims;

laudanum, $1\frac{1}{4}$ minim; chloroform, $\frac{3}{4}$ minim; and water, 100 minims.

I saw my patient again on the 11th March, when, to my agreeable surprise, she reported herself *cured!* She was ordered to discontinue the mixture. I saw her again on the 17th March at her own house, and she remained perfectly well, and with a heart brimful of gratitude she thanked me for having made "a perfect cure" and "a new woman" of her.

The action of the mixture.—As to the behaviour, so to speak, of the therapeutic agent or agents made use of. I learned the following from my patient. The first dose agreed very well with her, and the salivation perceptibly diminished. The second dose made her very sick, and she passed a greater quantity of saliva at that time than she usually passed. Nothing daunted, she determined to give the means a fair trial, and she took the third in fear and trembling lest she should be again sick; she was not, however, but on the contrary, both the sickness and the vomiting were decidedly lessened.

This was on the 5th March, the second dose having been taken in the morning of that day after breakfast. From this time she continued to improve with each dose; her appetite and sleep returned; her eyes brightened, and all her morbid symptoms entirely left her. It may be interesting to observe, that it frequently happened on taking food, particularly breakfast and dinner, she would be almost immediately seized with nausea and sickness, and a desire to be sick, and to vomit without actually vomiting. Under these circumstances, if she took a dose of the mixture, the symptoms of nausea, &c., invariably and at once disappeared as if by a charm. It may also be interesting to observe—and particularly interesting to those who look upon all inordinate or excessive discharges as eliminative of some poisonous or deleterious substance in the system, to know—that the discharge was stopped without the slightest visible physiological effect being produced by the therapeutic upon the system, or without a shadow of substitutive elimination being elsewhere induced. Still more—in this case, we have a discharge of fully three quarts of saliva *per diem,*

going on for more than three months, suddenly put an entire stop to; no other is substituted for it, and yet the woman is enjoying the most perfect health.

The modus operandi of the mixture.—I beg to offer the following rationale of the action of the mixture. In the first place, I do not believe that it acts locally as an astringent on the salivary glands. I believe that its therapeutic action depends upon the tonic and alterative properties which the ingredients are known to exercise upon the gastro-intestinal mucous membrane. I do not deny that the substances *may* be absorbed, and through the blood come to arrest the superactivity of the parotid, sub-maxillary, and sub-lingual glands, but I do not think that this is the manner in which the mixture acts. The sudden or immediate correction of the accompanying sensations of nausea and sickness shows plainly that its action is primarily on the stomach, by which it allays or removes some peculiar reflex irritation set up in that organ by conception and the progress of gestation; and which irritation in its turn, by a secondary reflex action, induces the salivation. It may be said that the ingredients of the mixture are all powerful astringents: granted, but the doses preclude the idea of their acting through the medium of the blood; besides, I have already stated that the mixture produced no visible physiological action whatever,—no, not even any degree of constipation or *vice versâ.*

The only other agent which is said to have had any success in controlling the salivation of pregnancy is quinine in two grain doses, *vide* Dr. Coale's case—'American Journal of Medical Science,' July, 1852, and Dr. Mauthner's experience —'Medical Times and Gazette,' November, 1857. Surely, quinine does not act as a blood astringent, but much more likely, by its well-known specific action, on the gastro-enteric mucous membrane.

I may add that I have given the prescription in its original virgin purity, fearing lest any alteration might be no improvement. I have to apologise for having but one case with which to illustrate the *success* of the treatment, a daring venture to say the least, but I claim the indulgence of the

Society on the ground that, as cases of the kind are comparatively few and far between, I have thought that the sooner the discovery (if such it is) was laid before my obstetric brethren, the sooner and the wider spread would be the benefit accruing to those who may have the sad misfortune to suffer from the terribly annoying infliction of the profuse salivation which sometimes accompanies pregnancy.

"CARBOLIZED SPONGE TENTS."—ON THE DEFECTS OF ORDINARY SPONGE TENTS; AND ON AN IMPROVED METHOD FOR THEIR MANUFACTURE.

By Robert Ellis, Esq.,

OBSTETRIC SURGEON TO THE CHELSEA AND BELGRAVE DISPENSARY.

The use of compressed sponge for the dilatation of the cervix uteri has become so very general, that the subject of this paper may appear almost trivial in its character. But in my opinion the grave objections which exist against the employment of those in common use fully justify an earnest attempt, either to remove defects, so generally complained of, or to produce a substitute at once as cheap and effective, but also free from the bad qualities possessed by the sponge. An eloquent writer on Uterine Surgery[1] says, "He who gives us an efficient, pleasant, and cheap substitute for sponge tents will confer a great boon on surgery. I know," he adds, "of no competent substitute, or I would be too willing to adopt it." It was expected that the sea-tangle tents would have served this purpose as efficiently as the sponge. But the experience of many obstetrists and my own, has shown that they are far less efficient as dilators, and but little less offensive in their employ than the material for which they are proposed to be substituted. In addition to which they are not easily secured in position, and are apt to be ejected from the canal of the cervix before their work is properly accomplished.

[1] Dr. Marion Sims.

I must fully agree with the eminent authority already quoted, as to the excellent qualities of sponge as a dilating agent, and I believe that no substitute for it is as yet known to us which can compare with it in its applicability to the end in view. This material is so flexible, elastic, cheap, and handy to use, adapts itself so perfectly to the varying calibre and curvatures of the cervical canal, that it is much to be regretted, that in actual use it is attended with such disgusting and dangerous properties as to make us eager for the discovery of any efficient substitute. In addition to its other good qualities is this, that when properly made it remains *in situ,* and requires no tampon to keep it there, or at any rate none larger than a small pledget of cotton wool.

But the sponge tents sold by the instrument makers, even by such as have, as we would suppose, the largest experience in their manufacture, are so clumsy and ill-proportioned as to be really a discredit to their producers. Some of those which I have obtained from Edinburgh, and which were manufactured by the eminent chemists instructed by Sir James Simpson, are as bad as any I have procured at places of less renown in London. They are seldom sufficiently compressed to be of as much dilating power as they really might possess; and their length is so extravagantly great that it is impossible to imbed them entirely within the cervical canal without causing a considerable portion to project far into the proper uterine cavity—a most objectionable circumstance. And if they cannot be thrust up to this extent, then the lower portion projects itself into the vagina, and owing to the form of the tent, the rest generally follows and is found some hours after, lying in that canal instead of in its proper place.

The common sponge tent is not merely liable to this defect of want of proportion to the canal we propose to dilate by its means, but also by its figure it is incapable of answering that purpose as it ought to do. It is frequently made of so extremely conical a shape as to facilitate, in fact, to invite its own rejection. It is saturated with tallow and wax, and a thick layer of this compound covers the surface. Since this

material does not quickly melt at the temperature of the body it follows that the sponge tent coated with it becomes really a slippery wedge, which refuses to be retained in place unless propped up by a plug. If the material were more quickly melted, then the sponge would at once adhere to the sides of the cervical canal and keep its proper position. The addition too of a filthy and greasy double fold of tape, to be allowed to hang out externally, appears as though it were designed to invite the premature removal of the tent by its impatient wearer.

With an instrument thus constructed, and so ignorantly formed, it is not surprising that the surgeon often bungles over the simple business of inserting the tent. Often, indeed, much pain is produced by the clumsiness of the thing, and especially when to keep it *in situ* we attempt to press it high up into and through the *os internum*. But defects of the kind here named are easy to be corrected by any one who will take pains to adapt his instrument to his case. And there are probably few members of this Society who will not agree with me in the opinion that there is an almost infinite variety in the size, capacity, and conformation of that portion of the body for which this instrument is designed. A sponge tent perfectly well adapted for one variety of the cervix uteri is entirely unfit for another. In this, indeed, this material, sponge, displays its superiority over all its substitutes—that it can so readily be fashioned to meet the requirements of the individual case to be dealt with. And in sponge tents properly manufactured, of a suitable description of sponge, of an appropriate length and figure adapted to the precise circumstances of the canal proposed to be operated upon, we possess, as it may be thought, all the qualities necessary to us.

But there is a radical defect in sponge as a dilating material, which is so serious as almost to neutralize its value. This is the horrible facility of decomposition which it seems to confer upon the discharges of these passages. No surgeon can have used sponge tents to any extent without a fear of the result to the patient in the production of blood-poisoning. The disgusting grave-like odour which is generated by them, after

a few hours' residence in the cervical canal, can only be fully appreciated by those who have frequently removed them in this putrefying condition. It is horrible alike to the surgeon and to the patient, who is frequently distressingly conscious of this impurity. The cause of this decomposition seems to have escaped the notice of most observers—at least, I have never seen it alluded to. There can be no doubt it is really due to the atmospheric air entangled in the interstices of the sponge, which, favoured by the high temperature, reacts upon the mucous and albuminous constituents of the discharges.

It is in consequence of the existence of this most offensive and dangerous property of sponge that surgeons have objected most strenuously to its employment. And the tents of the *Laminaria digitata* are undoubtedly less liable, on the whole, to this objection. There can, I think, be little doubt that serious if not fatal results following after dilatation with sponge tents may be attributed to this proclivity to decomposition, and though to some degree an advanced stage of putrefaction may be prevented by a more frequent change of the tents—still the retention of them only for a few hours is sufficient to commence it—and may be enough to excite mischief in a delicate and unhealthy subject.

In reply to these observations it may be said that the sponge tents of Dr. Marion Sims, prepared by soaking sponge in mucilage of gum arabic, and then drying, are properly manufactured, of convenient sizes and shapes. The objection just raised applies, however, equally to this as to the other kind of tents—and it is the most important of all. In addition, the tents made on Dr. Sims' plan have certainly not succeded as well in my hands as in his own. They are hard, inflexible, and almost resemble the sea-tangle tents in their density—and they possess a configuration which by no means represents that of the canal for which they are designed. The mucilage, also of which they partly consist, is extremely apt to be acid in its quality, and thus to act as an irritant of the surface to which it is applied. They have the advantage, however, over the ordinary kind, of being easily retained in

place, and they have no dependent strings attached to their base.

Having in vain sought to discover a substitute for sponge as a basis of the dilating tent, I have, nevertheless, succeeded in producing by its means a dilator, to which, I think, few if any of the objections hitherto brought against sponge can be truly applied. I submit to the notice of this meeting the specimens of carbolized sponge tents on the table, and I believe they will be found to fulfil every object for which sponge is valued as a dilator, without its general disadvantages and defects.

The carbolized sponge tents possess the following properties:—

1. They are sufficiently firm to admit of easy introduction, and yet pliant so as to adapt themselves to the varying curvatures of the cervical canal.

2. They are prepared very quickly, of cheap and simple materials, and may be made by any surgeon for his own use with great facility.

3. They take firm hold of the cervical canal, and require no tampon to keep them in place: and are easily removed with a dressing forceps, the tape being dispensed with.

4. They act with great efficiency as dilators—two or three in succession being generally sufficient to open the cervix so as to admit the finger.

5. *They remain perfectly inodorous, and exhibit no sign of putrefaction during their retention* in the uterine canal.

Their properties are due—1, to the peculiar, half-ovoid shape of the tent; 2, to the investing material, the theobromic oil; and 3, to the addition to the latter of a certain quantity of pure carbolic acid. In shape they have a rough resemblance to the cervical cavity, and are not acute pyramids or elongated cones like the ordinary tents—they are thus more readily embraced and retained. The coating employed is hard yet possesses a certain pliability, and very quickly melts at the temperature of the body. The well-known properties of carbolic acid, as a disinfectant, confer on these tents their most valuable attribute of resisting decomposition. In the

quantity which I recommend to be used, this addition does not irritate the surface to which it is applied.

They are thus manufactured—I shall be happy at the close of the meeting to give any practical information on this point to the members desiring it, my object being entirely a practical one in submitting so homely a subject to this Society:—

Sponge, which must not be of too close, nor of too cellular a character, may be had in small pieces, of the chemists, at a very small cost. The larger pieces are neither so good in quality nor so adapted for our use, and they are much more expensive. It must be well washed in several waters until all dirt, sand, and fragments of stone are removed from it. It is then to be very thoroughly and carefully dried. It is to be cut into pieces of about two inches in length, and of such a shape as to produce, when rolled tightly over with tape, a shape somewhat fusiform in its character. At page 128 is a diagram of the proper figure for this purpose. The pieces will be cut thicker or thinner according to the degree of dilatation intended to be effected. For the largest sizes they will require to be as thick as two fingers, or even larger. For the smallest—about the thickness of the little finger.

It is important to remember that the canal we propose to dilate by this means is not generally larger than from one inch and a quarter to an inch and a half—and is often not so long. It will be therefore necessary to have some of the pieces much shorter than two inches, but very rarely, and only in abnormally elongated cases, longer than this. The sponge tents which have been supplied to me by some chemists have been in several instances nearly three inches long—and would, if I had ventured to use them, have extended from the os uteri to the fundus of that organ! I have been obliged to cut down these most clumsy contrivances to bring them to a proper size.

At any tool warehouse a slender square-sided instrument may be got, called a "broach," and this forms an excellent axis on which to roll the sponge. On a round wire or other tool it constantly slips during the making. On the table are

specimens of the kind I find most useful. Inserting this pointed tool in the centre of the piece of sponge so as to form its long axis, one of the cut edges is to be forcibly squeezed down and pressed under the opposite, which may be made to roll over it and hold it down.[1] A piece of narrow tape is then to be rolled very tightly over the apex and brought up in regular spirals, lying close to each other, to the base, where it is fastened off. The fusiform shape is to be carefully preserved in binding the tape over the dried sponge. The tent is now ready for the first coating.

The best material for this part of the process is the cocoa-butter, or oil of theobroma. It has the advantage of being very firm, and so holding the compressed sponge well together, and it so quickly melts at the temperature of the body that the sponge tent immediately takes to its work, and does not slip from the canal. In general it is useful to add a few grains of white wax—from three to five—for every drachm of this oil. And in hot weather this is the more necessary. But I object to any larger addition, since it elevates the melting point, and vitiates the action of the tent.

In order to confer on these tents their peculiar disinfectant character, I have with great success, added to each ounce of the theobroma oil, one drachm and a half of pure carbolic acid. The effect is most remarkable; the tents are withdrawn as devoid of offensive odour as when they were introduced—and by this means I believe the great desideratum has been accomplished. It is certainly true that no longer can the sponge tent, thus prepared, be regarded as a disgusting, or worse, as a poisonous agent. The carbolic acid, in the proportion given, has no injurious effect, in the cases I have observed, upon the surfaces with which it is brought in contact—and these proportions are sufficient. If used in larger quantity it is very probable that some irritation and soreness would arise.

The tent is dipped into the butter, thus prepared, and kept in a fluid state either over a small flame or in a hot-water

[1] In the centre of the sponge I always place three or four strands of common cotton wick which have been dipped previously in pure carbolic acid.

bath. It is simply immersed in the melted oil for a few seconds, so as to saturate only the outer layer of the sponge, and this it does, penetrating readily through the tape. The tent is then placed in a very cool place, and after it has solidified the tape is cut and unrolled. All that is now necessary to complete it is to dip it once more into the same preparation — which for this latter purpose must be much cooler than before, and of about the consistency of cream. By this means a smooth and uniform covering is given to the tent, and it is ready for use. The tents, thus prepared, must be kept in a wide-mouth stoppered bottle, so as to preserve their antiseptic properties.

I may observe, in conclusion, that since the carbolic acid answers every purpose for which we require it, I have not attempted the use of other disinfectants. But it would be difficult to find a substitute for it, since many of the disinfecting agents act as astringents—whereas we need the very opposite quality. And the carbolic acid unites perfectly, and in any quantity, with the cocoa butter, and does not in any way interfere with the dilating properties of the sponge.

The carbolic acid which I use is the pure, crystalline kind. It is readily melted by gentle heat, and mingles with the oil at once on being stirred into it while fluid. It may be

The woodcut shows the simple instrument I employ for inserting these tents, and by its side the sponge tent of peculiar shape. The point of this instrument is imbedded in the tent, which is thus carried home, and when *in situ*, a gentle thrust of the curved wire attached to the side of the sound removes the tent and allows the instrument to be withdrawn, leaving the tent behind it.

convenient to some of the members of the Society if I state that Messrs. Bradley and Bourdas of Pont Street, Belgrave Square, undertake to supply medical men with these carbolized sponge tents at a very moderate price.

For placing the sponge tents *in situ*, I have constructed for myself, out of a common uterine sound, the simple and excellent instrument now shown to the Society. It is formed by merely soldering a small fillet of copper plate an inch from the sharpened end of the sound. The sponge tent is carried, its base resting on this plate, to its position, and by a touch of the forceps it is left behind, the sound coming away with great ease. The engraving represents this instrument, and shows also a slender steel wire running down its shank. This wire is for detaching the tent after it has been introduced into the cervix. By pushing it upwards it lifts the tent off the end of the sound, and the instrument is then withdrawn. This arrangement is handier in use than the forceps. Messrs. Mayer and Meltzer, of Great Portland Street, make this instrument.

PUERPERAL TEMPERATURES.

By William Squire, L.R.C.P., Lond.

It is to the careful study of the natural history of disease that medical science owes much of its recent progress; and some of its surest advances have been guided by the systematic use of the thermometer, in marking the variations of bodily temperature that accompany the ingress of disease, the persistence of morbid action, and the return to health. To the record of observations of this kind, taken during the puerperal state, the paper now submitted to the Obstetrical Society is chiefly devoted.

The instruments used are two sensitive mercurial thermometers, made for me by Newcombe and Symons, ten inches

in length, graduated, on Fahrenheit's scale, into degrees and fifths of degrees from 80° to 110°; one of them is self-registering: in a good light it is not difficult in either of them to read off tenths of degrees, by noticing whether the mercury is at one of the marks, or midway between two. The instances here given are stated in degrees and tenths of degrees, all of them having been read off direct from the same instrument; the self-registering one (though obviously convenient for many of the observations obtained) not having been depended upon for those here recorded.

Some comparative observations on variations of temperature are first to be given, together with those normal to the state of pregnancy, as far as they have been noted. The different phases of pregnancy could not fail to be illustrated by a further investigation, but opportunities of conveniently making observations of this kind, that shall be in every way unexceptionable, are not frequent.

The temperature of the body is somewhat increased during pregnancy, at least in the latter months. The normal temperature may be taken at 98°·75, the temperature after the sixth month of pregnancy will frequently be found somewhat over 99°. A variation is to be observed in different persons, and in the same person in different states of health; the limits of this variation, as consistent with health having been restricted in the cases I have noted, to one degree, viz., from 98°·8 to 99°·8, its range being less than in women of similar age when not pregnant. Some remarkable oscillations of temperature, such as we need not expect to find in pregnancy, have occurred in a few cases that have presented themselves to me for notice, which tend to show that there is a considerable fall in temperature on the occurrence of the catamenia, and a variable rise shortly before: in one instance the vaginal temperature was found to be 99°·8 on the day before the catamenial flow, and only 97°·3 on the day after. No observation was obtained on the intermediate day; the flow was not very free, and was unaided by alcoholic stimulants, indeed, these had been abstained from for nearly a month, until this day, when they were resumed; three days

afterwards the temperature was 98°·7, the period being then over: it had been in every respect normal, yet there was a fall of 2½ degrees in the first two days of its occurrence. In another case, where a vaginal operation was performed on the day preceding the expected period (which recurred with perfect regularity), the local temperature was 100°·1; eight days afterwards, though there was some persistent local irritation, the thermometer did not go beyond 98°·7. There may be considerable pain, tenderness, and sensation of heat, without the thermometer being much affected; in a case where these conditions were all present from the too free application of undiluted liquor plumbi to verrucæ of the labia minora and fourchette, the local temperature was only 98°·9, and even this was accompanied by a slight increase in the general temperature as taken in the axilla.

The difference between the vaginal and axillary temperatures will seldom be more than one third of a degree, and frequently only one fifth or one tenth, if in the latter situation all the requisite precautions to secure accuracy are observed. In this way 98°·45 was obtained as the normal temperature in the axilla, and 98°·75 in the vagina, where there were no disturbing circumstances; in a case of abortion at two months, the vaginal temperature on the ninth day was 98°·4, the axillary temperature 98°.

A comparison of these differences was made in the puerperal state; first, on the second day of delivery where slight perinæal fissure existed, the temperature there was 98°·5, in the axilla 98°·3; so that a local injury had not disturbed the usual relative temperatures: second, on the fifth day of delivery, where the breasts were very full and tender, the milk increasing, and the lochia decreasing, the axillary temperature had risen to 100°·3, the vaginal temperature was 100°·7; so that while in full activity the mammary gland does not, by its proximity to the axilla, unduly influence the results there obtained by the thermometer: in the third case, on the ninth day, a final application was required to complete the cicatrization of a perinæal fissure, the temperature there was 98°·3, that at the axilla 98°·2; in this latter situation

there was probably now less difficulty in obtaining the true temperature, on account of the process of lactation being in full activity.

The observations of puerperal temperatures, except in the instances especially noted, are all taken, as in ordinary illness, by placing the bulb of the thermometer in the axilla, being careful that it is in contact with both surfaces of the skin, that perfect contact is maintained for a sufficient time (*which should not be less than three minutes*), and guarding against the loss of heat that might be occasioned by evaporation from the surface, or from incomplete covering. There is not only no difficulty but considerable convenience in this method of watching progress through the lying-in state; the time occupied in other necessary inquiries, suffices for obtaining the required indications of the thermometer, which, when satisfactory, save further trouble and anxiety, and when not exactly as is to be wished and expected, give timely warning that precautions are needed.

The commotion and efforts of parturition itself, while confined within the ordinary and safe limits of natural labour, cause but a slight elevation of temperature. In the twelve cases, of which tabulated diagrams accompany this paper, this point was made the subject of exact observation in cases 1 and 9; it had previously attracted my attention in a case of prolonged first labour, which came under my notice last autumn, where there was great heat of surface, thirst, and remarkable dryness and heat of the passages, but no corresponding effect upon the thermometer; the patient had passed a night without sleep, and the greater part of the day without food: egg and milk, and a liberal supply of beef-tea, enabled the second stage of labour to be completed favorably. In case No. 1, on the diagram, the labour was more rapid, but of some severity, with considerable agitation, heat, and perspiration, and the development of the passages proceeding rapidly; the axillary temperature could not be obtained at even the usual standard; there was, however, a progressive increase shown by the thermometer used in the vaginal examinations; the highest reading, obtained half an hour before delivery here,

was 99°·9, in the axilla only 97°·8. In case No. 9, where the labour was more rapid, but much less severe, the temperature per vaginam, two hours after the commencement of labour, was 98°·9; in a similar observation, taken twenty minutes before the expulsion of the child, it was 99°·1, and ten minutes after, exactly 99°.

The elevation of temperature thus occasioned, is maintained to the termination of labour; then commences a steady decline, which in most cases, if not all, has reached the normal line and in some has descended considerably below it. This subsidence always takes place in the first twenty-four hours; it may, however, be prolonged into the second day, as in Case 9, or be accomplished within the twelve hours, as occurred in Case 6. In this case delivery took place at 3 a.m. with some hæmorrhage, sleep followed and the mammary secretion was rapidly established. In Case 9 a short labour terminated at 11 p.m., with no loss of blood, and followed by excitement rather than sleep, the lowest point was not reached until the second night, thirty hours after delivery. In Case 4, delivery at 7 a.m.; the temperature at 2 p.m. was 99·4, she had not slept, had only taken gruel, she herself felt cool and rather faint; after sleep the temperature soon subsided to the ordinary degree. A difference is noticeable in following the line of temperature in this case, it is the only one of the series in which suckling was not attempted. In Case 1, the high temperature noted during labour had fallen four hours afterwards to 99·2; the diagram in this case gives the simplest form of disturbance of temperature common to the puerperal state.

In all the cases here investigated, the most constant and most obvious disturbance of temperature is that which ushers in, and accompanies, the formation of milk. The commencement of this reaction is most regular; it attains a certain prominence forty-eight hours after the birth of the child. In only one of these twelve cases was this rise of temperature retarded, in only two was it accelerated. The termination of this reaction is most variable; the modification which the line of temperature now undergoes from the merest acci-

dents, before it settles down into the normal line at the period of convalescence, fully warrants the care and watchfulness at this time traditionally conceded.

Where the secretion of milk is readily established, the rise in temperature necessary to its formation at once experiences a considerable fall; this is shown in Nos. 1, 3, 6, and 9, where a fall of at least one degree occurs within twenty-four hours; in the three last the temperature has in that time fallen to a point as much below the ordinary temperature as it had previously been above it. In these cases there was at the same time a very free flow of milk.

To obviate any sources of error due to diurnal oscillations of temperature, observations were taken in Case 2 twice every day, between nine and ten o'clock morning and evening, until the fifth day, at noon on some of these days, and in the afternoon on the subsequent days; these showed a uniform progression in the direction indicated, and it was not until the puerperal state was nearly over, and the convalescence well advanced, that the ordinary diurnal variations of temperature again became evident. This case was that of a younger person than those previously referred to, lying-in with her second child; the secretion of milk not so quickly elaborated; the tendency to a fall of temperature is shown on the fourth day, when it would probably have been completed had not constipation on that day occasioned a sudden rise of half a degree, with as sudden a fall upon its relief, unless, indeed, this rise (which was only to 99·1) was necessary to the free establishment of the mammary secretion, and the cause rather than the consequence of the constipation.

In Case 4, where the mammary function was never excited into activity, the first rise in temperature is more gradual, hardly reaches the same height as the other cases, and subsides more slowly. There could not be a greater contrast than is shown by this case and the two others in the same diagram (Table II); in all three the ages, health, and general conditions were very similar, all had borne several children, but Case 6 was the only one that had habitually given suck, and the rapidity of the usual changes

of temperature in this case, has been before alluded to. A similar rapidity of subsidence with a still more marked reaction is noticeable in Case 5, in which a tedious labour with twins was terminated at 11 p.m., by turning the second child; sleep followed; an egg was taken at breakfast, and chicken for dinner; the temperature at noon was 98°, at night 99·9; the secretion of milk was plentiful after the fifth day; both children were suckled and the case progressed favorably, but the high line of temperature (100·3 on the third and fifth days) shows the difference between recovery from a trial of this kind, and that from the more ordinary accidents of Case 6.

Cases 8, 10, and 11, were primiparæ; in all, the milk process was slowly settled. In Case 8 there was a less rapid recovery from the first low stage of temperature, which continued through the third day. Even in this case a slight rise of temperature on the second day seemed to indicate the occurrence of the expected phenomena, but a restless night was followed by another day of low temperature; the next night some brandy and egg procured sleep, aided the rise of temperature from 98·4 to 99·9, and enabled the milk process to be actively carried on; this was not without some discomfort at first, and the temperature for two days continued high, it came down to 98·6 on the eighth day, and the mother eventually became a good nurse. In Case 10 the usual wave of temperature followed labour, but its subsidence was arrested by trouble in the breasts, the nipples cracked at first, afterwards fibrinous pellicles formed on the papillæ of the nipple, and once or twice there was fear of some of the ducts remaining obstructed: it was a question of management throughout whether the breasts should inflame or the milk be diminished; on the twelfth day the former alternative threatened but was avoided, the temperature at the same time running up in one afternoon from 100° to 102°, and coming down three degrees in the next two days; after this the milk was thin, and though not plentiful, would too readily escape; at the end of two months it ceased altogether. In Case 11 the low stage was rather more marked than

usual; delivery was at 3 a.m., followed by a slightly excitable state and no sleep; the temperature was slow in subsiding; at 2 p.m. it was still 99·4; at noon next day it was lower by a whole degree; the rapidity and intensity of the subsequent rise is very notable; by 3 p.m. on the following day it reached 103·3. On the eighth day it was 103·6, it then fell a degree and a third, viz., 102·3, only to rise the next day to 104·37; it was not till the fourteenth day that it subsided from 103·3 to 100·8, and the day after to 99°. The temperature was quite normal by the twenty-first day, and at the month's end the patient had become active and strong again, and was gaining flesh, and made a thoroughly good nurse. The possibility that a temperature so elevated should be maintained by the body for twelve days, without either function or organ suffering, is most remarkable.

Chloroform was given in these two last cases, but it could scarcely have influenced their progress, as in Case 11 only half a drachm was consumed, and in Case 10 it was of great service throughout the last two hours of labour, and neither sickness or headache attended or followed its use; nor were its effects traceable in any of the subsequent conditions, unless a rigor fifteen hours afterwards could in any way be attributable to it. The temperature six hours after delivery in this case was high, 99·5, but was down to 98·5 within the twenty-four hours.

Chloroform was given also to the same extent in Case 3, and there seemed to cause depression; the temperature six hours after labour was down to 98°, and in twenty-four hours was below 97°; its effects were also noticeable in an intermittent pulse to the third day, yet good progress was uninterrupted, and in no case was a more favorable and rapid recovery attained.

Alcoholic stimulants were given: in—

Case 1, on the third day with food and continued.

Case 2, not till the evening of third day.

Case 4, once on the third day, and not again till the seventh, when they were continued.

Case 5, no stimulant allowed till the eighth day.

Case 6, at noon on the third day and continued.

Case 7, was never discontinued.

Case 8, a little on the third day, and with meals on the fifth day.

Case 9, on the fourth day; no stimulants taken for many weeks before.

Case 10, stimulants taken up to and during labour, none after till tenth day.

Case 11, unaccustomed to stimulants; a little on ninth day and discontinued.

Case 12, abstains from stimulants altogether and trusts too much to farinaceous food and slops; a little wine was taken on the twelfth day, but it was said to check appetite; the rise in temperature on the fourteenth day was attributable to the commencement of active exertion under these circumstances; a freer diet and more careful rest, both contributed to the subsequent fall of temperature; nursing has now been continued nearly six months, with more ease than on former occasions.

Case 7 is, in many respects, the converse of this one, the fall of temperature was checked by brandy; the subsequent rise steadied and maintained by stout; on the sixth day some difference had to be made on account of heat, and pain of the left breast; suckling has since been easy, but the involution of the uterus was retarded, and coloured discharge occurred throughout the month.

In one case, the particulars of which were not recorded, where a high temperature continued after the flow of milk was free, the use of alcoholic stimulants resulted in abscess of the breast; in another case, where the same conditions existed, by withholding stimulants till the temperature subsided, a similar risk was avoided, and nursing was well performed afterwards. In such cases the thermometer is a safe guide, and should therefore be used in every case, if it were only for this one indication.

Where the secretion of milk is free and the temperature low, alcoholic stimulants are safe and beneficial as adjuncts to food:—their use may be serviceable and even advisable

where the milk secretion is not free and the temperature still high, so long as no local mischief threatens in the breasts:—they are not suitable to the stage of low temperature which succeeds to labour; at this time warm diluents, and solid food best aid the expected reaction.

The state of the bowels as noted in these twelve cases is, that they acted naturally every day in only one case, No. 4; they acted without assistance on the second day in *two* cases, Nos. 7 and 12. An enema was used in Cases 2 and 3. Castor oil was given on the fourth day in Cases 6, 8, 9, and 11; in the first two of these only was its action beneficial, in Case 9 an enema would have been better; and in Case 11, an earlier use of it might have been serviceable: it was given on the third day in Cases 1, 5, and 10; in the first case its action only checked the flow of milk for that day; in Case 5 it acted rather freely and it was thought at the time injuriously; in Case 10 it is noted in the report of the case the day after, that "the oil has checked the secretion of milk, but has not reduced the temperature, an enema would be better."

The general conclusions offered to this Society as fairly deducible from these observations are—

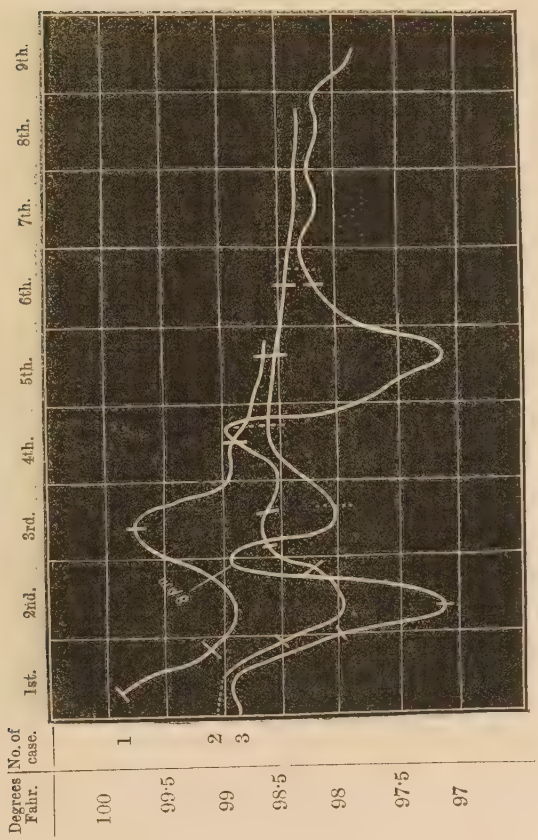
1st.—That no great elevation of temperature arises in natural labour.

2nd.—That there is afterwards a considerable fall of temperature which is favoured by sleep.

3rd.—That there is a subsequent exaltation of temperature which has for its natural termination the secretion of milk.

4th.—That the bringing the method of observation here followed to the study of the puerperal state, would add an element of certainty to the principles and details of its management, and afford an additional guide for safe conduct through some of its complications.

TABLE I.



The transverse marks indicate the times of taking the observations: these are not in all cases given.

TABLE II.

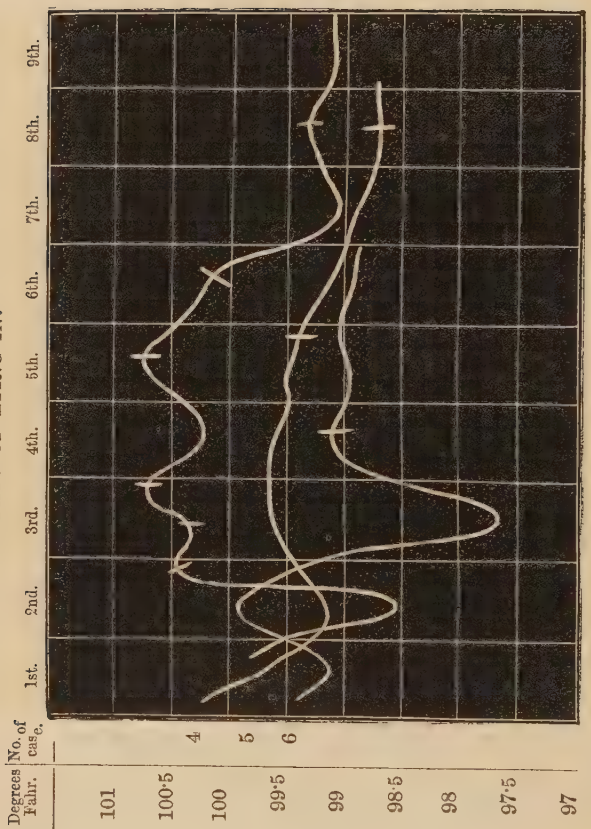

DAYS OF LYING-IN.
1st.
2nd.
3rd.
4th.
5th.
6th.
7th.
8th.
9th.
Degrees Fahr.
No. of case.
101
100·5
100
99·5
99
98·5
98
97·5
97
4
5
6

TABLE III.

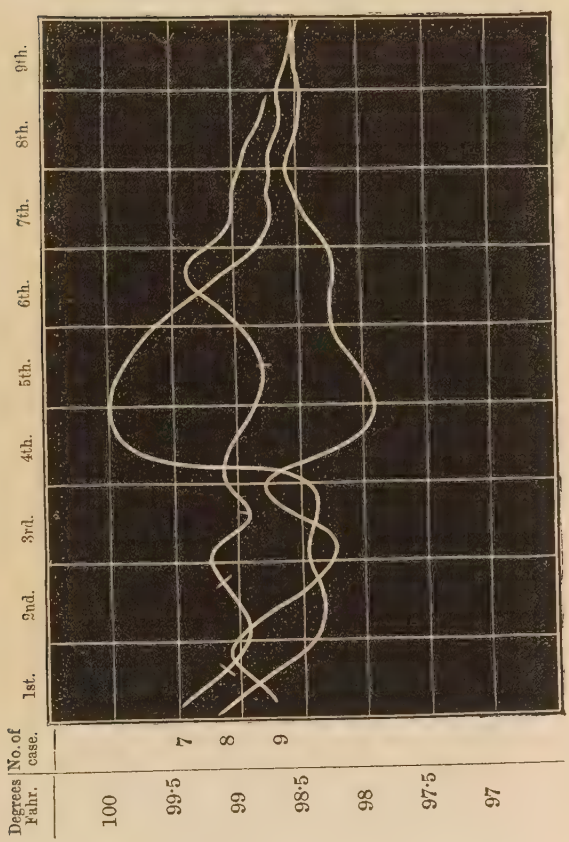
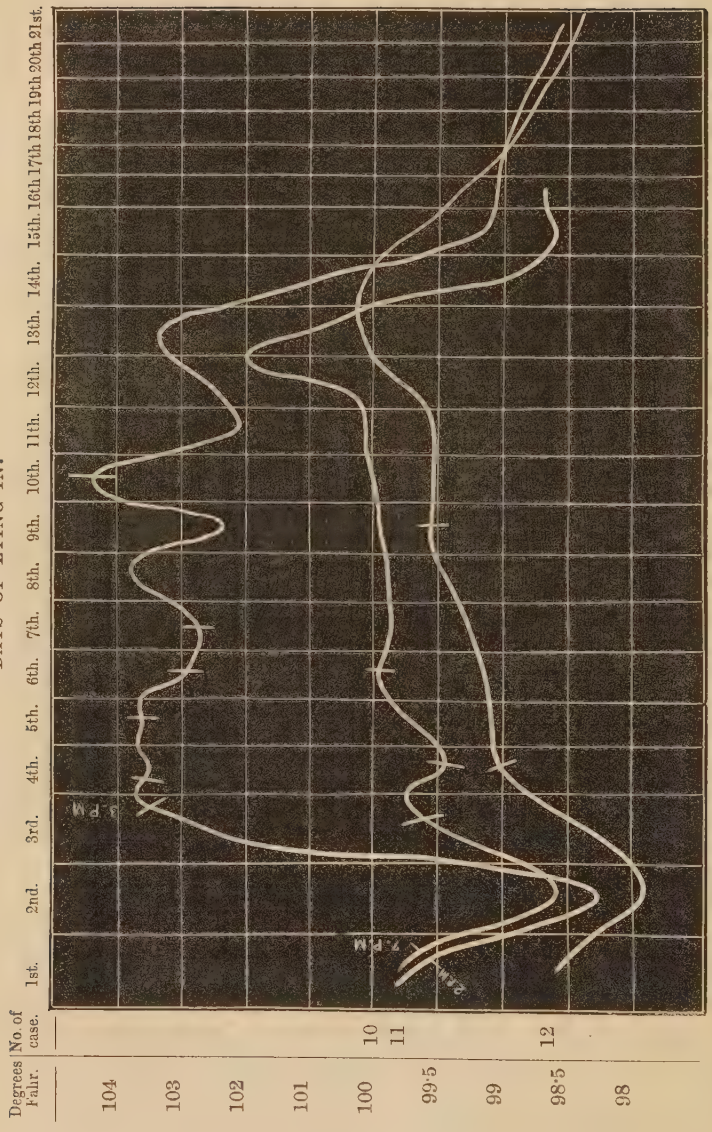

DAYS OF LYING-IN.
1st.
2nd.
3rd.
4th.
5th.
6th.
7th.
8th.
9th.
Degrees Fahr.
No. of case.
100
99·5
99
98·5
98
97·5
97
7
8
9

TABLE IV.


DAYS OF LYING-IN.
1st. 2nd. 3rd. 4th. 5th. 6th. 7th. 8th. 9th. 10th. 11th. 12th. 13th. 14th. 15th. 16th. 17th. 18th. 19th. 20th. 21st.
Degrees Fahr.
104
103
102
101
100
99·5
99
98·5
98
No. of case.
10
11
12
3 P.M.
7 P.M.

Dr. WILTSHIRE said he was glad that the attention of the Society had been drawn to the subject, from which he believed important information would be derived; but he demurred to Mr. Squire's conclusions as being based upon such a small number of cases. He referred to the observations already made by Dr. Von Grunewaldt, of St. Petersburg, upon 432 cases, and to observations made by himself on twenty-four cases during the latter months of last year. In some of these cases the temperature, as taken in the axilla, was actually below the normal standard, and the difficulty in arriving at a satisfactory conclusion respecting the normal variations of temperature was very considerable. On the whole, his observations agreed with those of Von Grunewaldt and Wunderlich (whom Von Grunewaldt quotes), as giving a mean of 98° F. as the temperature of lying-in women. Dr. Wiltshire then referred to the absence from Mr. Squire's paper of any notice of the ratio of the pulse and respiration, and of the influence of operative procedures. In his twenty-four cases, three were forceps cases, one a breach, one a footling case, and in one labour was complicated by an ovarian tumour, and the patient died five weeks after delivery. In this case after the third day the temperature was never below 101°.

Dr. GRAILY HEWITT considered the observations of Mr. Squire of the highest value and importance. Doubtless further observations would be made by others, but so far the results obtained afforded valuable indications. He was particularly interested in the question of the diet of child-bed, and Mr. Squire's results afforded confirmation of a point he had always strongly contended for—viz., the necessity for administering nourishment and food in good quantity immediately after the labour; for when such support was not given the temperature rose to an unnatural height, and the return to the normal temperature was impeded and retarded in proportion. The positive data obtainable by the thermometer would, he believed, prove exceedingly valuable as indications for treatment, just as Mr. Squire had pointed out. In one point he would venture to differ from Mr. Squire—as to the nature of milk abscess. He believed that milk abscess arose always from milk retention, and that high temperature connected with milk abscess did not indicate therefore inflammation of the breast.

Dr. SANSOM thought the paper of great value and interest. He did not think, with one of the preceding speakers, that, in such an investigation as this, conclusions were valueless unless founded on a large number of observations. In the study of temperature it was more valuable to follow each case *per se*, and rather to investigate the causes which led to an increase or decrease of temperature, than to strike a mean from a number of observations and endeavour to fix the line of what shall be called a

normal or an abnormal state. This was illustrated by the author's diagrams, which showed that what is the natural temperature in one case is not so in another; and collateral observation showed in each instance fair reasons for the variations. It was strange that no rise of temperature should be noted during the stages of labour; for the production of heat was a necessary corollary from the physical conditions. Where there is inordinate muscular action, there must be an increase of heat; though it does not follow that this must be necessarily detected. The debasement of temperature, uniform in all or nearly all the cases on the second day, was an interesting fact, corroborating *à priori* reasonings.

After a few remarks from Mr. Haviland,

Mr. Squire replied, and, in answer to the objections of Dr. Wiltshire, stated that the ratio of the pulse and respiration was noted in the records of each case. In the one with an unusually high temperature, while this was at 102° and 103°, the respiration was not accelerated (it was 18 and 19 in the minute), and the pulse but slightly accelerated (98 to 116). Again, though more numerous cases might be obtained in a lying-in hospital, there was an advantage in examining cases where all the conditions are known, where the previous health had been under observation, and where the hygienic conditions were unexceptionable. Agreeing with the remarks of Dr. Hewitt as to the mode of production of milk abscess, yet the way in which the milk ducts were obstructed had to be considered. This might be occasioned by inflammatory action outside the glandular structures, or by fibrinous exudation from the interior of a duct. Early indications of these dangers were given by the thermometer. In one of the cases a sudden rise on the twelfth day led to the discovery of a blush of redness under the left breast, which otherwise might not have been noticed until too late to obviate its consequences; and, in two other instances, by attention to the indications of the thermometer and the rules adopted, patients have been able to nurse well who on previous occasions had suffered from abscess in the breast. With respect to Dr. Sansom's observations, it was certain that though there might be a great amount of heat given off during the exertions of the second stage of labour, there was no great elevation of the general temperature of the body. In conclusion, Mr. Squire would remark, that did these observations do no more than indicate to the practitioner which of the cases under his care required watching, and which could be safely left without a visit on days when engagements were pressing, this would be a sufficient equivalent for the time spent in making them; while to the patient they were never irksome, but rather afforded her a sense of satisfaction.

OCTOBER 2ND, 1867.

Dr. JOHN HALL DAVIS, President, in the chair.

Present—35 Fellows and 4 visitors.

Dr. J. Wynne Hale, of Barking Road, Essex, was elected a Fellow.

The following gentlemen were admitted Fellows by the President:—Drs. W. Dunderdale, R. H. Mitchell; Messrs. Charles C. Fuller, William Adams, Walter Leaf; *on having signed the obligation paper*, E. G. Clarke, Esq.; J. W. Hembrough, Esq.; Dr. Saboia.

Mr. SQUIRE wished to observe that at the last meeting of the Society he had understood Dr. Wiltshire to say that although he had made some observations on puerperal temperatures, they had afforded no definite indications, and that therefore he had not given them publicity; but seeing by the journals that Dr. Wiltshire appealed to them as agreeing with those of Von Grunewaldt and Winderlich, and therefore disagreeing with his (Mr. Squire's), he wished to draw the attention of the Society to what the difference was. Von Grunewaldt made the mean temperature just after labour in fifty-two cases to be below 99° F., and then to rise progressively; but he (Mr. Squire) showed that the true temperature was not obtainable in the axilla during and immediately after labour, and that therefore the temporary subsidence of temperature that followed had hitherto

been unnoticed. In the sudden rise of temperature for the formation of milk, its subsequent subsidence, the very general return to the normal temperature by the seventh day, even to the effect of a cracked nipple in keeping the temperature high, the results he had obtained Mr. Squire stated to agree with the observations of Von Grunewaldt, and that these observations approached nearer to true temperature than those of Wünderlich. How near to these Dr. Wiltshire's observations approximated he was unable to say, but he suspected them to be open to the source of error that it was the object of his paper to remove.

Dr. Wiltshire remarked that in the observations he had made on puerperal temperatures he had adopted the same method as Von Grunewaldt and Wünderlich, and had placed the thermometer in the axilla, whereas Mr. Squire had placed it in the vagina; and that this, probably, might account for the differences to which Mr. Squire alluded.

ON THE INDICATIONS FOR THE EMPLOYMENT OF A DRILL-CROTCHET; ITS SPECIAL ADVANTAGES IN CERTAIN FORMS OF LABOUR, WITH A DESCRIPTION OF THE INSTRUMENT.

By Dr. Eastlake.

FELLOW OF THE COLLEGE OF PHYSICIANS, DUBLIN; PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL; CONSULTING ACCOUCHEUR TO THE WESTERN DISPENSARY, WESTMINSTER; HONORARY FELLOW OF THE OBSTETRICAL SOCIETY, BERLIN, ETC. ETC.

In the present day, when the use of the cephalotribe and craniotomy forceps in difficult labour is daily becoming more and more recognised in this country, and when certain eminent accoucheurs are endeavouring to show the inutility of the crotchet, and to banish it altogether as an obstetric

instrument, I trust that I shall not be accused of retrogression if, instead of participating with these views, I now come forward to advocate the use of a new form of crotchet which has been constructed under my directions by Messrs. Mayer and Meltzer of Great Portland Street, and which appears to me to be a most useful instrument in certain forms of parturition. Experience is after all the true test of any practical application, and it is because I have proved the value of the drill-crotchet in actual practice, that I now venture to bring it before the notice of the Obstetrical Society. I may as well at once state that in the cases in which I specially recommend its employment, no other instrument is required, as it is alone sufficient to accomplish delivery.

It may, however, be used separately, either as an efficient perforator or crotchet, in any case in which these different instruments are required. I propose first giving a description of the instrument, and then pointing out the cases in which I would suggest its employment, and the advantages gained by its use.

The drill-crotchet may be described in the following manner :—It consists of a hollow metallic cylinder to one extremity of which is attached a transverse wooden handle, while to the other is fixed a solid steel trocar point, the length being eleven inches from the lower surface of the handle to the point. Through an aperture in the centre of the handle connected with the hollow of the tube is inserted a steel bar, having at the extreme end a rack, which, acting against a cog-wheel close to the apex of the instrument, enables a bifid crotchet to be forced out at any desired angle. The mode of extruding the crotchet by means of the rack-movement, which can be accomplished instantaneously, is effected by pressure on the bar by means of a button in close proximity to the handle. In order to bring the crotchet into play, a pressure on the button downwards and *towards the handle* is required, and for the purpose of closing the crotchet flush with the tube, the direction of the pressure must be downwards and *towards the point.* The

FRONT
SIDE
SECTION
½LENGTH

application of the instrument is extremely simple. The handle being held firmly in the right hand of the operator, the trocar point is guided in its passage through the vagina by the groove formed between the index and middle fingers of the left hand until it reaches the fœtal head. The trocar point should be then fixed at right angles with the skull, and the perforation effected in the usual manner by a drilling semi-rotatory movement. By this process the cranium is pierced in a few seconds, and when this is accomplished the crotchet can be made to act in the manner already described. A firm hold being obtained, the fingers of the left hand should be placed outside that portion of the skull to which the crotchet is attached internally. In this way, if both hands be made to act in unison during traction, all danger to the soft parts of the mother will be avoided. The sharp and bifid nature of the crotchet is rather an element of safety than of danger, for the points become at once so embedded into the osseous structure, that the worst that can happen is the detachment of a small portion of bone, for I have not found this form of crotchet at all prone to slip when once a firm hold has been obtained.

Should the operator desire to withdraw the instrument, the projecting crotchet may be instantly closed by pressure on the button, as already indicated. After use, it will be found necessary to cleanse the instrument, the interior of which often contains coagulated blood and cerebral substance ; this may be readily effected by first unscrewing the button, when the steel bar can be wholly withdrawn. The cylinder can then be thoroughly cleansed by pouring a stream of water through the opening in the handle, and can afterwards be well dried by means of tow or cotton fastened to a wire. The special circumstances which may be said to render the employment of the drill-crotchet practicable and useful are the following :—

1. The presentation being natural, the fœtus being dead, and the head within reach.

2. If the patient is still in the first stage of labour, the

os uteri must be sufficiently dilated to admit of the introduction of at least two fingers.

3. If the delivery is to be effected by the sole use of the drill-crotchet, there must be an absence of any great disproportion between the fœtal skull and the canal of the maternal pelvis, except in the case of a hydrocephalic head, when the use of the instrument would probably alone be sufficient. Lastly, these conditions being present, its application will be found most valuable in all cases in which *from any cause immediate delivery is indicated.* From the foregoing observations I think it will be very reasonable to imagine that the instrument will prove serviceable in many complications to which parturition is liable. Thus, under certain circumstances, in puerperal convulsions during labour, especially where the os uteri is but partially opened. Again, in cases of great prostration from hæmorrhage or other causes, and where neither the application of the forceps nor the operation of turning are either practicable or justifiable. It might, moreover, be very suitable in certain cases of ruptured uterus, or again in some forms of obstructed labour, due to a cancerous condition of the neck of the womb, or obstinate rigidity of the os uteri. Finally, I imagine that the drill-crotchet might occasionally be used with success for the extraction of the head when the latter has been separated from the child's body and left in utero.

Special advantages of the instrument.—The peculiar shape and mechanism of the drill-crotchet confer upon it certain advantages which are worthy of note. In the first place, I know of no perforator which pierces the cranium so speedily and effectually as that which is shaped like a trocar. Smellie's scissors, which are so often used for opening the head, are very apt to glide between the scalp and the bones.

Secondly, the benefit of accomplishing the perforation and extraction by means of one instrument whenever it is feasible must be manifest to every one. When two separate instruments are employed it sometimes happens that after the head has been pierced, we find that the aperture is not

large enough to admit the crotchet. This necessitates the withdrawal of the instrument and the reintroduction of the scissors to enlarge the opening, and ultimately the crotchet to effect the extraction. Under such circumstances an instrument must be carried into the vagina four times, and in any event twice during the operation.

Thirdly, where two instruments are obliged to be used, we must always carefully avoid opening the head through a suture or a fontanelle, lest, after the perforator is withdrawn, the bones collapse and close over before we have time to introduce the crotchet, in which case a fresh opening has to be made. In using the drill-crotchet, on the contrary, which has not to be withdrawn, a positive advantage might be gained by making the instrument penetrate through a fontanelle, especially the anterior one, as it would enable a large portion of cerebral substance to escape, which would not occur if the trocar point had been driven through the solid bone.

Finally, in cases of great disproportion between the fœtal head and pelvic canal, where the whole vault of the cranium requires to be broken up, and no further purchase can be obtained by any crotchet within the skull, the instrument under consideration may be conveniently made to substitute the vertebral hook invented by Dr. Oldham. The trocar point should be inserted into the foramen magnum, when a slight projection of the crotchet will enable it to become fixed in the spinal canal, and a strong hold consequently obtained. I have not yet had the opportunity of testing the value of the drill-crotchet in the whole class of cases in which I have suggested its employment; I have nevertheless used it both as a perforator and a crotchet separately, and combined.

Dr. Greenhalgh considered the instrument exhibited by Dr. Eastlake well adapted to the class of cases in which he had recommended its use. It appeared to him, however, that being able to place the crotchet at any angle would prove a great advantage, and the more so if it could be fixed at such angle. Dr. Greenhalgh regretted that the inventor had not endeavoured

to adapt his ingenious instrument to all cases requiring the use of the perforator and crotchet.

The President observed that the combination of a perforator and a crotchet, as exhibited in Dr. Eastlake's instrument, might, if modified, be found useful in the minor difficulties of craniotomy deliveries by those operators who were still partial to the use of the crotchet. But to be safely employed, the crotchet should be rendered less sharp, as there would be—except in the cases of thick skulls—a great probability of its transfixing the cranium, and wounding the operator's fingers. Moreover, the trocar, for safety, required the addition of a canula to guard its point during its passage to the head. Without it, a sudden movement of the patient would expose her tissues to injury.

A LARGE FIBROID POLYPUS PEDICULATED AT ITS BASE TO POSTERIOR MARGIN OF OS UTERI, ITS NECK PROTRUDED AT VULVA; REMOVED BY THE SINGLE WIRE ÉCRASEUR.

By J. Hall Davis, M.D., F.R.C.P.,

OBSTETRIC PHYSICIAN AND LECTURER ON MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN AT THE MIDDLESEX HOSPITAL, ETC. ETC.

The subject of this case was a married lady, æt. 34, who had resided nineteen years in India, where she had, till latterly, enjoyed fair health, and had given birth to six children without difficulty.

For the last two years she had had slight pain in sacral and lumbar regions, with sense of bearing down, and leucorrhœal discharge, which had much increased of late.

Without any sufficient local inquiry, this lady had been treated for descent of the uterus, of which she herself believed she had been the subject, ever since her last confinement, two years ago.

Under that erroneous impression a sponge pessary had been introduced into the vagina three months ago, and had been unaccountably left in that passage till the present time.

I met my friend Mr. Baker, of York place, who had seen this lady but once for a few moments at his own house, and suggested my being consulted.

The sponge being removed with the aid of the "abortion forceps," and in a highly offensive state, as was to be expected, the vagina having been washed out with Condy's fluid, the patient was placed under chloroform at her own urgent request. The uterus being much elevated by the upward pressure of the polypus, the necessary examination required the introduction of the entire hand into the vagina, which was thus, under anæsthesia, rendered easy to the operator and painless to the patient.

A considerable-sized tumour was found to fill and distend the vagina, its broad extremity being pediculated by a stem of nearly one inch in thickness to the posterior margin of the os uteri. The sound was now passed by the side of the pedicle into the cavity of the uterus, and yielded the normal measurement. The inferior portion of the tumour was shaped like the neck of an ordinary polypus, and at its extremity, which protruded at the vulva, there was a fissure which admitted a probe into its interior. The protruded portion, indeed, bore some slight resemblance to the neck of a virgin uterus.

The case, which had, up to my friend seeing the patient, been treated as one of prolapse of the uterus, was thus satisfactorily proved to us to be one of polypus, and one in which the usual position of the neck of the tumour was reversed. A purgative was ordered, and the day of operation fixed.

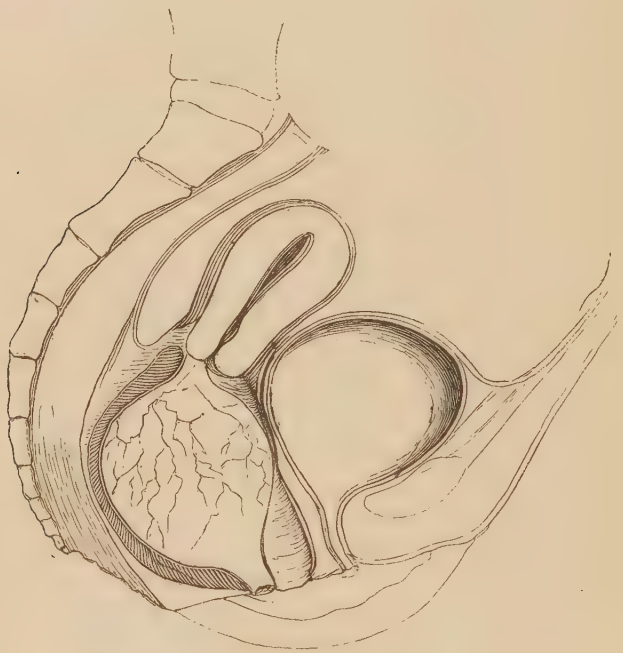
At our next visit (Sept. 5th, 1867), the bowels having been fully relieved, I removed the tumour, dividing its pedicle by the single wire écraseur of Mayer and Meltzer, a small quantity of chloroform only being required.

The patient recovered quickly without a bad symptom, and has since left London for Lucerne, whither her husband had gone to an appointment.

The polypus was found to consist of fibroid tissue, nearly one inch of its thickness next to the surface being closely arranged; but in its interior, as a section into it showed,

the fibres are so loosely disposed as to inclose cellular spaces, which contained an albuminous fluid. The weight was a little under a pound.

(The annexed sketch shows the growth as it appeared in situ.)



As is usual with polypi of the uterus not pediculated within its cavity, the patient, although otherwise enfeebled by her disease, had been entirely free from floodings.

BROMIDE OF POTASSIUM IN PUERPERAL MANIA.

By J. B. Curgenven, Esq.

In April, 1866, I attended a patient during her first labour. The child was born about a month prematurely, the labour was easy and natural, and all went well until the fourth day. She had been taken out of bed on that day by the nurse, and from sitting in an American cloth chair she took cold. The night following she did not sleep, she was troubled with delusions about her mouth and throat; she would not nurse her child, of which she had previously been anxiously fond. When asked questions she did not answer; she sat up in bed staring wildly about, pushing her fingers into her mouth and holding her lower jaw down with the other hand.

I gave her a calomel and colocynth purge, followed by a mixture of morphia and henbane every four hours. Three nights were passed without sleep; on the fourth, at 8 p.m., I gave her twenty grains of bromide of potassium, repeating the dose at 10 p.m. She fell asleep within an hour after the second dose, and slept until 7 a.m. She awoke calm, took some nourishment, and slept again until 10 a.m. When I saw her she was lying quietly in bed, with a very different expression of countenance than on the previous day. She answered my questions, saying she was better, but feeling very weak.

I could not persuade myself that this remarkable change could be due to just two doses of the bromide; I therefore determined not to give it that night. The next day I found my patient with all the old symptoms returned, and she had not slept five minutes during the night. I now ordered the bromide to be given each night. She again slept soundly for many hours, as before, sleeping also at

intervals during the day, and all symptoms of mania vanished. In three days she took the single dose only at night, and at the end of a week the drug was discontinued.

In March, 1867, a patient that I had attended in her first labour showed every symptom of an impending attack of puerperal mania on the fifth day. She had slept only from one to two hours on each of the two preceding nights; she was restless, cross, and snappish in temper; her tongue was coated, and pulse quick. I ordered her a calomel and colocynth purge, and gave her fifteen grains of bromide of potassium every four hours. The first night after this she slept four hours, the next night seven, and all the threatening symptoms disappeared. She took a dose of the bromide each night for two nights more, when it was discontinued.

I believe we have in this drug a medicine of remarkable power in allaying nervous irritability and procuring sleep, and I hope my experience of its usefulness in this uncontrollable malady may be confirmed by other Fellows of this Society.

CASE OF TRIPLETS.

By C. H. J. Routh, M.D.,

SENIOR PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN TO THE NORTH LONDON HOSPITAL FOR DISEASES OF THE CHEST.

I was requested by Dr. Saunders of South Molton Street, one evening in November last, to see with him a Mrs. G— in labour, but in whom all pains had ceased. We learnt on inquiry the following particulars. She was married at 22 years old. Three months after marriage she had flooded, but was unable to say whether it was due to a miscarriage. Eighteen months after she had twins. She

was attended by a midwife. One child was born at 6.30 o'clock on Monday morning, and the midwife left. The next day Mrs G— sent for the parish surgeon, and was delivered of a second child at 3.30 o'clock p.m. Tuesday, by turning. She was told it was a cross birth. Eighteen months subsequently she had a stillborn child, since then three other children and two miscarriages.

Mrs. G— was a stoutish-looking Irishwoman, but with very feeble pulse, and, on inquiry, had been of late badly fed, her husband being out of work. She had been in labour eighteen hours, and the pains were almost stopped. The abdomen was very large and pendulous. Having applied a bandage round the abdomen I proceeded to examine her. The external passages were lax; the os uteri completely dilated; the sacrum, however, projected a good deal anteriorly so as to shorten the antero-posterior diameter. The head was resting partly upon the pubis, but quite within reach. Brandy and ergot having been given, I advised Dr. S— to deliver by forceps, which was readily done and a moderate-sized child abstracted. A second examination revealed the existence of a second child. No pains were present, so after a short period we administered ergot and brandy pretty freely, and I proceeded to deliver by the forceps. A second child about the same size as the first was thus brought into the world.

A total suspension of pains resulted. On examination we found a third child, the arm presenting with slight prolapse of the funis. The greater part of this child's lower half of the body rested upon the pubes, the shoulders upon the sacrum. The os uteri had also contracted considerably; one leg of the child could be felt; the membranes were intact and very tough, and it was with great difficulty I could rupture them. The turning was then effected and a third child born. The placentæ were three, each with a separate chord. The parenchyma of two were united. There was no hæmorrhage. The two boys and girl all lived. Dr. Saunders informs me the case progressed in every way satisfactorily.

Remarks.—This case presents one or two points of interest apart from its being a triple birth. The deformity of the pelvis, which was probably in some measure the cause of the inertia uteri, and which necessitated manual interference.

2nd. The delivery of the second child in the twin labour a whole day after the first, an unusual occurrence, but which doubtless would have recurred on this occasion but for our interference. It is also quite within the range of possibility they might have not been born for days after, and thus afforded another instance of what some (although, I think, erroneously) regard as evidences of superfœtation.

CASE OF SPINA BIFIDA WITH TALIPES VARUS OF BOTH FEET.

By Henry M. Madge, M.D.

Mrs. J—, the mother of the child whose case is the subject of this paper, is well formed and of healthy appearance, and has passed through several confinements. Her first labour was associated with albuminuria and anasarca, and was protracted and difficult. Delivery was effected by the use of forceps, and the child survived its birth but a short time. The second labour was more favorable, no signs of dropsical swelling were present, and the child was born before assistance could be obtained. This child is alive and well. Several months after her second confinement Mrs. J— changed her residence, and about the same time became again pregnant. After she had been in her new abode a few days she was much startled on seeing a deformed person, with crooked spine and club-feet, struggling and making great efforts, on all fours, to get up stairs; this was her new landlord, whom she had not seen before, and whose deformity she was not aware of.

She states that the circumstances connected with this shock or surprise had such a powerful effect on her that they were ever present to her mind during the entire period of her pregnancy. She was confined on November 4th, 1863, of a male child. The labour was comparatively easy and rapid, so much so that she was again without assistance at the moment of the child's birth. She had gone the full term, and the child was large and well nourished. On examining it I found a large reddish tumour in the lumbar region, about three inches in diameter and bulging to the extent of about two inches from the body. There was also talipes varus of both feet; the child was otherwise well formed. Means were taken to protect the tumour from injury, and gentle pressure was applied. The child took the breast well, and thrived like other children. Head well proportioned to the body, circumference, at six months, about seventeen inches. Sutures normal, and were closing gradually in the usual manner. The ordinary indications of infantile intelligence were present, and there were no convulsions. Fæces passed involuntarily, but there was some power over the bladder; the urine was occasionally retained several hours, and came away in a good stream. The tumour was usually transparent, like a hydrocele; sometimes, however, its thin external covering would crack and give rise to a moisture, which, on drying, caused an opacity. It was generally kept well smeared with simple cerate. Firm pressure on it, with the view of emptying or lessening its contents, did not produce any perceptible effect on the child's system. General health always good; limbs active and strong, lower, however, less so than upper.

The mother, bewildered by a host of recommendations from various quarters, took the child to the Children's Hospital in Great Ormond Street. Very little was done by way of treatment for the spina bifida, but on calling one day, I found that one of the surgeons of that institution had operated on the child for the cure of the talipes. Both of the feet and legs were bandaged, and remained so for some time. Nothing particular, however, resulted from the

operation, which, under the circumstances, many practitioners would probably have considered rather useless and uncalled for.

On June 4th, 1864, the child suddenly became feverish and restless, and refused the breast. The next day, on examining the tumour, I found it was opaque, and otherwise much changed in appearance. Its surface was mottled with purplish and greyish spots, and in some parts ulceration seemed to have commenced. It was also softer, as if some of its contents had oozed out. The child died in a few days.

I was only allowed to make a partial examination of the tumour two days after death. It was about the same size as when the child was born. On opening it about half a pint of opaque, flaky, fœtid fluid came away. At the seat of the swelling the spinal marrow was soft and diffluent, but higher up it was firmer. As far as I could make out with my finger through the opening I had made (not being permitted to cut down on the parts), all the lower lumbar vertebra were partially displaced or disorganized. It was suspected by the mother and also by myself that, either from an accidental blow or a fall, the tumour had been injured, and inflammation set up.

Soon after Mrs. J—'s third confinement she again changed her residence; she has since been twice confined, and on both occasions, as regards both mother and child, everything turned out perfectly natural and satisfactory.

Remarks.—I have delayed publishing this case with the view of seeing whether any births, taking place after the change of residence spoken of, would turn out favorably or otherwise. I have not brought it forward in support of any particular doctrine, but have merely stated the facts as I found them. I am not prepared to say that the strong impression, photographed, as it were, on the mother's mind, had anything to do with the deformity of her child, but it must, I think, be allowed, that if the latter can only be

regarded as a coincidence, that the coincidence was a very remarkable one.

With regard to treatment, the swelling was so large that it was thought by myself and by others who saw it unadvisable to meddle with it any further than keeping up continuous gentle pressure.

It may be worth mentioning that Mr. Coates has published a case in the 'Lancet' (March 3rd, 1866), where he succeeded in curing a case of spina bifida by injecting the tumour with a solution of iodine and iodide of potassium. This case, he states, was the first successful one treated by injection in this country.

INDUCTION OF PREMATURE LABOUR BY INJECTION TO THE FUNDUS OF THE UTERUS.

By J. Lazarewitch,

PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN AT THE UNIVERSITY OF KHARKOFF, HONORARY FELLOW OF THE OBSTETRICAL SOCIETY OF LONDON, AND FELLOW OF THE SOCIETY OF PHYSICIANS OF ST. PETERSBURG, KIEFF AND KHARKOFF.

Artificial induction of labour is produced by irritation acting reflexively on the motor nerves of the uterus.

In all the modes of induction of premature labour care should be taken to excite the action of the uterus as commodiously, quickly, and inoffensively as possible to the mother and child.

The various modes are principally distinguished:

1st. In regard to the place of their application or action; and,

2nd. In the difference of material, construction, and properties of the apparatus or instrument used.

The places and modes are the following:

(1.) Those which are remote from the uterus: the use of internal remedies, as ergot of rye, &c.; irritation of the

breasts; galvanism and electricity; manipulation of the abdominal walls.

(2.) Those acting on the vagina, and the use of carbonic acid gas and atmospheric air.

(3.) Those applied within the cervix of the uterus.

(4.) Those which act on the membranes of the ovum.

(5.) Those having to do with the cavity of the uterus (methods of Hamilton, Riecke, Simpson, Krause, Braun, Cohen, and myself).

With regard to the different modes of operation in the induction of premature labour the seat of action performs the principal part; but the difference of construction and material of the acting apparatus or instrument, as well as the mode of its application or action, are of secondary importance.

In the various modes of artificial induction of labour different results of action are obtained, in proportion to the irritation acting reflexively on the motor nerves of the uterus.

In comparing the results of action in the different modes of induction of premature labour, we must conclude that the most efficient modes are those in which the irritation is immediately directed to the uterus; and I have arrived at the conclusion, *that the deeper the irritation acts on the internal surface of the uterus (the nearer to its fundus), the more speedy and sure is the result of such action, and* vice versâ: *the nearer the seat of irritation is to the orifice of the uterus, the more violent and protracted must it be, that its result may be successful and quick.* I here state the grounds on which my conclusion is founded.

1. On examining the action produced by the various modes of exciting the contraction of the uterus, we find the least resulting where only the inferior section of the uterus is irritated; while those methods which cause irritation on the inner surface of the body and fundus of the uterus are the most sure and quick.

2. On examining the cases, in which irritation was produced by injection of fluid into the cavity of the uterus,

we observe that the nearer the fluid reached the fundus of the uterus the quicker and more violent the contraction of that organ followed. I account for the diversity in the results of injection into the uterus thus: by the method of Cohen the fluid is injected through a tube with one end closed and with side apertures; consequently the fluid injected through such a tube is discharged on the sides, and does not penetrate upwards to the fundus of the uterus. If a small quantity of fluid is injected it is discharged upon the orifice of the uterus, separating only the inferior part of the membranes of the ovum from the inferior section of the uterus. The action of such injection is very feeble, and in its results may be compared with that of Hamilton's. If a great quantity of fluid is injected, and if it is obstructed in its return, it must spread over the ovum above, because the uterus is less capacious below; and the larger the quantity of fluid injected the nearer it approaches to the fundus of the uterus, which is the more sensible to irritation and therefore the quicker and more certain will follow the contraction of the uterus. As a proof of this the following cases may serve, in which the injection was used, and the fluid therefore spread only in the inferior part of the cavity of the uterus. Naegele ('Med. Pereins. Zeitsscher,' 1849, No. 36), introduced the tube half inch into the cavity of the uterus, and only after repeating the injections from six to eight times, in the course of two days parturition took place. The reason why the action was here so tardy is because the greater part of the water immediately after injection flowed back, and because the water acted only on the inferior section of the uterus. Steiz in each injection used two ounces of fluid, which, on account of the small quantity of it, did not spread farther than the inferior section of the uterus, and therefore acted feebly in contracting it. For this reason in one case ('Deutsche Klinik,' 1854, No. 2), twelve such injections were required, and the labour continued four days, and in the other thirteen injections, and the labour continued five days. In all the other cases of Steiz the injections exhibited tardy action for the same reason. In one case Palenta ('Wochen-

blatt,' 1856, No. 31), introduced an elastic catheter between the membranes of the ovum and the posterior wall of the uterus one and half inches upwards, and injected one ounce of water. It is not astonishing that six such injections acted very feebly. On the next day two injections were made of six ounces each, and violent and frequent contractions ensued after five minutes; on the third day such injection appeared still more effective.

Lastly, in a case of Scanzoni ('Beilr. z Geburtsk,' 1855, b. ii, s. 48), we see a complete failure in the operation, because the injected fluid, without penetrating into the cavity of the uterus, immediately flowed back.

We observe the contrary in those cases in which as much as a pound of fluid is employed, and when it is retained in the cavity of the uterus; only a single injection has often been sufficient, as is evident from the observations of Cohen ('Monatsschr. f. Geb.,' 1855, b. i, fl. 1); Riedel ('Idem.,' b. xi, h. 2, 3); in two cases of Riedel ('Idem.,' b. vii, h. 2); and in one of Credé ('Idem.,' b. xi, h. 2) during injection the patient clearly felt the fluid passing upwards to the fundus of the uterus. After such an injection violent contraction of the uterus always ensued, and in all these cases a single injection was sufficient for the induction of labour. The same I have also observed in cases of artificial induction of labour, and in some cases of retardation of labour, in which I used injections to excite the pains.

I am of opinion that in those cases, in which during injection the patient felt the fluid passing upwards to the fundus of the uterus, sometimes attended with a slight dull pain in the epigastrium, and sometimes with nausea, the feeling is caused by the injected fluid passing between the membranes of the ovum and the anterior wall of the uterus. The irritation from the injected fluid being communicated to the sensitive nerves of the abdominal walls. If the fluid is directed along the posterior wall of the uterus, the passing of the liquid is not felt, because the walls of the uterus have not sensitive nerves, which might transfer to the brain the sensation of the irritation produced. I do not doubt

that the same thing takes place on the motions of the fœtus, and that they are perceived by the pregnant woman only when the kicks of the fœtus are directed against the anterior or lateral wall of the uterus, and are communicated to the abdominal walls.

I made some experiments on cats and rabbits. After giving them chloroform, I opened the abdomen, wishing to be convinced of the influence of the nervous centres, sympathetic nerve, and compression of the abdominal aorta on uterine contractions, and produced direct irritation of the uterus and vagina. Five rabbits were with young. The two uterine cornua of each of them contained from three to six embryones, inclosed in compartments, separated from each other by narrow necks. Irritating the uterus and vagina at different points by electricity or mechanically, I was convinced that the most sensitive parts to irritation were—the union of the uterus with the vagina, then the rest of the latter, then the necks of the uterine cornua and their extremities; and the irritation acted very feebly, or not at all, on the walls of the cornua dilated by the embryo. The latter were so thin that they were even transparent. From these experiments I concluded that the thicker the wall of that part of the cornua, or of the vagina, more irritation is produced.

In a pregnant woman we find the walls of the fundus and the body of the uterus much thicker than its neck; and therefore, supposing that the thicker the wall of the uterus the more nerves it contains and the more susceptible it is to irritations, we must conclude that the fundus and body of the uterus are more irritable.

If, during parturition, the inferior part of the uterus is irritated with the finger introduced into the vagina, the contraction will follow with more difficulty than by irritating the fundus of the uterus by rubbing the abdominal walls with the hand.

Again, the inferior section of the uterus is exposed to different irritations; by coitus, by repeated internal explorations, by pressure of the presenting part of the child, &c.

All these modes of irritation deaden the sensitive nerves in the inferior section of the uterus to such a degree, that the irritation must be very great and protracted, to excite by reflex action the contraction of the uterus.

The body and fundus of the uterus, on the contrary, are protected from the different irritations being uniformly supported by the abdominal walls.

At the commencement of parturition the cause of the uterine contractions may be thus accounted for; at the termination of pregnancy the connection of the ovum with the uterus gradually diminishes, until at length a considerable part of the ovum's connection is quite destroyed. On this place the interior wall of the uterus, touching the separated segment of the ovum like a foreign body, experiences irritation, and is excited to contraction. The character of such irritation is easily understood; if we place one of our hands upon the other, we do not feel the same irritation as when the hand of another person is brought into prolonged contact with ours. In like manner also the wall of the uterus does not experience irritation from the ovum so long as they are organically connected. The greater the separation of the membranes of the ovum from the walls of the uterus and the nearer to its fundus, the more violent is its irritation.

When the development of the ovum is complete, the action of placenta can no longer satisfy the wants of the fœtus, which requires a larger quantity of oxygen and other nutritive matter, and the organism, the motor organs of which act more evidently than the capacity of the ovum admits. When the fœtus is mature the ovum is gradually enucleated and separated from the cavity of the uterus by its contractions, which are excited by the contact of the partially separated ovum with the uterus.

In this manner I explain the occurrence of labour at the end of pregnancy, and am of opinion that the uterine contractions ensue feebly and imperceptibly, till the membranes of the ovum are separated from the walls of the uterus only, in its inferior part. During labour the ovum separates

more and more, still nearer to the fundus of the uterus, and at the same time, by increasing irritation, the contractions become more and more vehement, until the fœtus is expelled.

In the artificial induction of labour the best mode of irritating the uterus and exciting it to contractions is that which most resembles the action of nature at the end of pregnancy. The most natural and rational method is that in which the ovum separates from the walls of the uterus, or in which the enucleation of the ovum co-operates. *The nearer to the fundus of the uterus the ovum is detached* the more effective is the result of the action. This is the reason why the methods of inducing premature labour of Lehman, Krause, Cohen, and finally mine, are the most sure, and why my method does not require violent irritation, acting after sufficient fluid has passed even once between the membranes of the ovum and the walls of the uterus. For greater convenience, I will briefly recapitulate the above statements.

1. The surest methods of induction of premature labour are those in which the body or fundus of the uterus is excited.

2. In the method of Cohen, the greater the quantity of fluid used in injections the nearer it reached to the fundus of the uterus, the surer was the action.

3. When, after injection, the fluid passed upwards to the fundus of the uterus, violent contraction always ensued immediately.

4. In the experiments on rabbits the thickest part of the uterine walls proved to be the most irritable; in a pregnant woman the body and fundus of the uterus is the thickest.

5. On introducing the sound into the cavity of the uterus in its normal state, pain is caused only by contact with the fundus.

6. At the time of parturition contractions of the uterus are more quickly excited by rubbing the fundus of it than by the irritation of its inferior section.

7. The inferior section of the uterus is exposed to many

different irritations, and therefore its sensitiveness is blunted.

8. The commencement of parturition is caused by the gradual separation of the membranes of the ovum from the walls of the uterus, and when this separation is complete, nearer to the fundus of it.

From the above statements we may conclude that, *for sure action of injection, it is necessary that the fluid injected should approach as near as possible to the fundus of the uterus,* this being the most sensitive to irritations.

The fluid injected by my method is directed upwards to the fundus of the uterus, there spreading, separates from it the membranes of the ovum, and flows back only after some minutes, or even after some hours, because it is easily retained in the superior section of the uterus. In this manner considerable and rather protracted irritation is produced at the fundus of the uterus.

In those cases of induction of premature labour in which the fluid was not retained in the cavity of the uterus, but flowed back immediately after injection, there was little or no effect, because the fluid spread only in the inferior part of the uterus, little sensitive to irritations. Cohen was convinced that for a successful injection a conical tube should be employed, which, being closely applied to the orifice of the uterus, would thus prevent the fluid from flowing back. In my opinion the fluid should, in this case, be directed to the fundus of the uterus. But if injection is used, when a woman is brought to bed not for the first time, in the last month of pregnancy, when the vaginal portion is very soft, and its internal and external orifices are wide open, it is impossible to press the tube to the orifice of the uterus, so as to prevent the fluid from running back; still less possible is it when the uterine orifice is considerably distended, and it is necessary to excite lingering labour; in these cases, as in all others, it is very convenient to use also a conical tube, not with the end closed and side apertures, as Cohen advises, but with a single aperture at the end, in such a case all the fluid injected must pass in

an upward direction, to the fundus of the uterus. In this modification of the tube the difference between my method and that of Cohen consists—by his method the injected fluid must pass into cavity of the uterus, by mine it must be directed *to its fundus.*

The tube employed by me in the first three cases, which I am about to describe, is elastic, from six to eight inches in length, one end being one and a half line in diameter, and the other six lines; its smaller end is somewhat rounded, and has one aperture. For the more convenient introduction of the tube, and to give it the necessary curvature, a metallic wire is introduced into it, bent to a right angle in two opposite directions. Thus a joint is formed, which, retained by the edge of the larger aperture of the tube, does not admit of its passing through the narrow aperture of the tube. The tube is fixed to the end of a syringe, and is adjusted to it by means of gutta percha.

In 1861, during my stay in Vienna, the instrument-maker Leiter adjusted the above-described tube to an india-rubber bag, which worked like a syringe. With such an apparatus Professor C. Braun in one of the following cases employed my method of induction of premature labour.

In the same year, at Berlin, Professor Martin made to me the following remark, respecting my method of injection: he considered the possibility of air passing into the cavity of the uterus to be dangerous.

It becomes quite impossible with a well constructed apparatus for injection and the proper employment of it. After *filling the syringe, and holding it with the handle downwards, the piston should be moved till the air, rising to the end of the tube, be expelled by the water, which has to pass to the aperture of the tube.* The piston must move easily, and fit the cylinder exactly.

For the purpose of injecting fluid into the cavity of the uterus, M. Edelberg in Kharkoff has, after my direction, constructed a special apparatus. This aparatus consists of a metallic cylinder seven and a half inches in diameter. A piston furnished with an indented stem is worked by a

toothed wheel, with a spring inclosed in a drum attached to the upper part of the cylinder. The spring is wound up by a small crank, which may be taken off during the operation. The action of the spring, and consequently of injection, may be retained with a stop. By slightly pressing a knob it is easy to connect the stop with the toothed wheel, and in this manner arrest the action of the spring. On the smooth side of the stem are divisions marking the quantity of fluid contained below the piston.

To the cylinder a tube is attached six inches long, and three lines thick, with one aperture at the end of it. This tube is made of pliant metal, and therefore it may be bent at pleasure; on its concave side it is marked to show how much of it is introduced into the cavity of the uterus.

Another tube, similar to that described above, but with a closed end, and with two apertures; one in front and the other behind. The fluid injected through this tube must spread over the uterus, and cannot take a side direction to the orifice of the viaduct.

For artificial induction of labour I use only a tube with a single aperture at the end. I will now describe some cases of induction of premature labour, in which my method was employed—injecting water *to the fundus of the uterus.* The first two cases were described by me in 1858 ('On Injection into the Uterus,' Kieff,—in the Russian language); the third in 1861 ('Einige Bemerkungen über die Uterin-injection,' &c., Allg. Wien. Met. Zeit.,' No. 25, 27); the fourth case I have mentioned in my remarks on a journey abroad ('University Intelligence,' Kieff, 1861,—in Russian), in this case the operation was performed by Professor C. Braun in Vienna; the last eight cases have not been described before.

Case 1.—On the 15th of August, 1856, I was summoned to Mrs. Z—, in Kieff, who was then twenty-four years of age, of middle stature and weak constitution. From her I learnt that she did not begin to walk till she was nearly four years old, and for a long time had not a firm step; besides, in

infancy she had often suffered from scrofulous inflammation of the eyes and swelling of the submaxillary glands. In her fifteenth year menstruation first began. At twenty-two she was married, and four months afterwards, in consequence of a fall, she miscarried three months after conception. On the 15th of December, 1855, she had for the last time menstruation, and at the beginning of May, in the following year, she felt the first kicking at the fundus. At the beginning of pregnancy she vomited almost every morning, and in the seventh month of pregnancy vomiting took place after almost every kind of nutriment, and in spite of all the means employed, it did not diminish. During the whole time of pregnancy, especially in the last two months, Mrs. Z— was very weak. On the 10th of August she experienced violent depression of spirits, and then felt a still greater diminution of strength, a total loss of appetite, and at intervals a slight shivering. She soon remarked discontinuation of the movements of the child, which had before been quite apparent.

I found the patient considerably exhausted; her breasts were soft, and on pressing them no milk came out. The transverse diameter of the uterus was greater than the longitudinal; the fundus was between the navel and epigastrium, and the navel was flat. It was difficult to feel the extremities of the child on the right side of the uterus, on account of its considerable distension by the liquor amnii. The pulsations of the fœtal heart and the uterine murmur were inaudible. On internal examination I found the vagina rather narrow, the external orifice of the uterus admitted the finger end, and the internal was closed. The presenting part of the child could not be reached; the os uteri was directed to the sacrum.

Taking into consideration the daily vomiting, which reduced the patient to a state of exhaustion, I determined to induce premature labour; the more willingly, because I was convinced that the child was dead, for the pulsations of its heart could not be heard, and the patient had not felt during five days its movements. The external measurement

of the pelvis on account of the patient's leanness was made rather correctly. The external conjugate diameter was six and a half, the distance from the promontory of the sacrum to the triangular ligament of the pubis was four inches; therefore the sacro-pubic diameter must have been three and a half inches. The small size of the pelvis made it still more necessary to have recourse to induction of premature labour. I did not delay the operation, because the patient could take scarcely any nutriment without vomiting immediately afterwards. In the thirty-fifth week of pregnancy, on the 16th of August, at 12 o'clock in the day, I made the first injection. The patient lay in bed with the pelvis slightly raised. I introduced into the vagina the above-described elastic tube, with the wire in it, and tried to guide the extremity of the tube through the internal orifice of the uterus. After the introduction of the tube into the orifice of the uterus, I injected six ounces of water at the temperature of 28° Riaumont. The patient then observed both *the warmth of the fluid and its movement upwards to the navel and somewhat higher*. For about a quarter of an hour the patient lay in a horizontal position. When I drew out of the orifice of the uterus the elastic tube, the warm water flowed back. After this injection the patient immediately felt a slight pain below the abdomen, caused by the contraction of the uterus. Afterwards the labour-pains recurred almost every twenty minutes. At 9 o'clock in the evening, I found that the vaginal portion of the uterus had completely disappeared, and its orifice was half an inch in diameter. But as the patient had felt only very slight pains, I made one more injection, when she again felt how the fluid was directed upwards above the navel. The labour-pains increased by degrees, and at 7 o'clock in the evening the orifice of the uterus was completely dilated. The presenting part was the elbow; with the finger of the left hand, behind the left margin of the uterine orifice I could easily reach the head of the child. Convinced that the position of the child was oblique, I introduced the left hand between the posterior wall of the uterus and the membranes, ruptured

them, and brought down one leg of the child. In half an hour, in consequence of rather violent labour-pains, the child was expelled in the first dorso-anterior pelvic presentation.

The child, a girl, weighing five pounds, was dead, its skin was pale, and the epidermis easily came off. After twenty minutes the placenta was expelled. The patient quickly recovered, having left her bed in nine days.

Case 2.—Mrs. N—, æt. 40, of a strong constitution, and of middle stature, had given birth to five children, the last of which eleven years before the case to be described. The first time she gave birth in convulsions to a male child, which was delivered with forceps, and soon died of eclampsia. To her four subsequent children she gave birth without any accident.

About the end of February, 1856, she had for the last time menstruated. From persons who surrounded the patient I learned that some days before I was summoned she had begun to feel a headache, which gradually increased; at intervals her eyes grew dim; and on the 6th of November, 1856, at eleven o'clock in the morning, she suddenly felt that her sight was worse, and soon after that she was perfectly blind. About noon she had an attack of eclampsia, which recurred in an hour, and afterwards the convulsive fits became more frequent and violent; in the intervals the patient remained in a sleepy state. Before my arrival she had thirteen convulsive fits. Leeches had been applied behind the ears, and the patient had taken an infusion of four grains of ipecacuanha with acid. phosphor. dilut.

I found her in a sleepy state. Her face was pale, bluish, puffed; having opened the eyelids, I saw that the pupil was immoveable and dilated; near the right corner of the mouth was a blood-stain. The temperature of her body was rather high. Her legs were œdematous. The abdomen protruded considerably; the fundus of the uterus was under the ensiform cartilage. On the left side of the abdomen the pulsation of the fœtal heart was distinctly audible. The patient laid on her back, with her breast and head

raised, with her extremities stretched; and her respiration was attended with loud snoring.

By degrees the respiration grew more quiet; the patient opened her eyes: they were fixed, the pupils dilated. Afterwards the eyes moved slowly in their sockets upwards, then to the right, and the face turned also slowly in the same direction. After some seconds the patient turned her head slowly to the left, her eyes rolling to the left and upwards. At the same time the muscles of the face were perfectly quiet. But on a sudden the patient uttered a piercing scream, her mouth was protracted towards her left ear, and this was accompanied with quick convulsions of the muscles, first on the left side of the face, then on the right; a rapid movement of the eyelids was particularly remarkable.

The muscles of the neck, of the upper portion of the breast, and of the extremities, were seized with convulsions. The arms were stretched forwards by their violent pronation; the hands were bent inwards; the flexors of the fingers were contracted. The extended legs alternately beat the bed. The face became more and more swollen; the tongue was protruded several times between the teeth on the right side; froth and blood were discharged from the mouth. At last, the convulsions of the muscles of the face as well as of the other muscles began to diminish. The face was much swollen and livid. The patient began to snore heavily and violently; the lividity and swelling of the face gradually diminished. The paroxysm lasted about two minutes; after it the patient was in a sleepy state for about fifteen minutes, and then followed another fit similar to the preceding one. The pulse in the intervals was rather full and quick (120), but during the paroxysms it became more feeble and quicker. The body during the paroxysms remained in the same place. By an internal exploration I found that the vagina was rather narrow; the vaginal portion of the uterus was half an inch long; the external orifice and the canal of the cervix were penetrable; the internal orifice was closed, but rather dilatable, and through

it the head of the child, which was rather high and movable, could be touched.

To quiet the cerebro-spinal irritation, I prescribed tinct. opii, twenty drops in a clyster, the application of cold to the head and sinapisms to various parts of the body. Concluding that it was the ninth month of pregnancy, I determined to induce labour, hoping by this means to put an end to the fits of eclampsia.

At ten o'clock in the evening I injected into the cavity of the uterus six ounces of water, at 28° R. After injection, contraction of the uterus immediately ensued, during which the patient put her hands on the abdomen, and groaned feebly. In a few minutes the uterus contracted still more violently. After one clyster with twenty drops tinct. opii, the fits of eclampsia became more feeble and less frequent.

At two o'clock in the night I left the patient. Before my arrival at eight o'clock in the morning two more clysters of opium were used, and the patient had only four feeble attacks of convulsions; she appeared to be asleep, and during labour pains, sometimes groaned, and placed her hands on the abdomen.

On the following morning at eight o'clock I found the patient asleep. The pulsations of the fœtal heart were still audible; the orifice of the uterus was two inches in diameter; the child was in the left occipito-anterior position. About one o'clock in the day the bag broke, and the waters were evacuated; the orifice of the uterus was quite dilated; the labour pains were violent and frequent, during which the patient extended her hands to the external organs of generation, and groaned. For about an hour the head of the child remained in the same position at the entrance into the canal of the pelvis; a tumour of the scalp was beginning to form. In spite of violent and frequent labour pains, the head remained in the same place; therefore I applied the forceps, and extracted a male child alive, weighing about eight pounds; he lived eight days, and died of convulsions. Fifteen minutes after the birth of

the child the placenta was expelled. The next day the patient was in a delirium; she had lost all recollection; everything appeared to her to be black. Her recovery was rather slow. On the 10th day the patient left her bed, and in a month quitted Kieff in perfectly good health.

Case 3.—Mrs. E—, æt. 26, of dark complexion, low stature, and weak constitution, married three years.

On the 14th of August, in 1858, she was in labour for the first time, and applied to me for help. At one o'clock in the night her labour pains began, and soon afterwards the waters were evacuated. On examining her at two p.m. I found that the uterus was bent somewhat to the right, and forwards; the fœtal pulsations were audible on the right side of the inferior portion of the abdomen; the orifice of the uterus was perfectly dilated; the head of the child was fixed at the entrance into the pelvis in the right occipito-posterior position. On measuring the pelvis, I found that the diameter of cr. ilei was ten inches; of sp. ilei nine inches; cong. ext. seven inches. The distance from the promontory of the sacrum to the triangular ligament of the pubis was four inches, from which I concluded that the pelvis was contracted. The labour pains were rather violent and frequent; but notwithstanding this, on making explorations at four p.m., I found no change whatever in the position of the head, although a considerable tumour had already formed on it. The patient was uneasy, her pulse was 100 in a minute. I applied the forceps, and succeeded in extracting the head only after very violent tractions. During the operation, the patient was under the influence of chloroform; the operation lasted about forty-five minutes. The child was born in asphyxia, but soon revived. It was a boy, weighing about seven pounds; a considerable tumour was on its head. After the expulsion of the child, hæmorrhage immediately manifested itself, continuing even after the delivery of the placenta, until I arrested it by compressing the abdominal aorta. After labour, the mother speedily recovered, and nursed the child herself

during ten months. After weaning the child, she had menstruation three times, at intervals of six weeks, and the fourth time at the end of one month, on the 10th September, 1859. During the last menstruation she suffered from diarrhœa, which lasted two days, and she fainted several times.

In January, 1860, she for the first time felt the kicking of the child, and in the same evening she had hysteric fits without any visible cause.

On the 19th of February I made an exploration, and found that the fundus of the uterus reached the umbilicus; on the left side of the inferior section of the abdomen 128 pulsations of the fœtal heart were heard per minute; on the right the uterine murmur was distinctly audible, 80 times per minute. In the latter place the patient occasionally felt pain. The movements of the child were in the upper part on the right side. On measuring the pelvis I found the same small dimensions as in the previous exploration. Being assured that the pelvis was contracted I determined, with the consent of the patient and her husband, to induce premature labour in the thirty-sixth week of pregnancy.

Examining the patient on the first day of May, I found that the fundus of the uterus was four fingers below the ensiform cartilage, and that the uterus was rather inclined to the right side. On the left side of the abdomen 128 pulsations of the fœtal heart were heard per minute; and on the right the uterine murmur. The vagina was rather unyielding, the vaginal portion, half inch in length, was high and directed to the sacrum. The finger penetrated easily into the exterior orifice of the uterus, through the canal of the cervix, and with some difficulty passed into the internal orifice of the uterus. The presenting head was movable.

At 5 p.m. I injected six ounces of water, 28° R., and immediately afterwards observed that the membranes of the ovum were expanded. An hour later the labour pains were apparent and recurred every fifteen minutes. At 9 p.m. the mouth of the uterus was opened three quarters of an

inch in diameter; the margins of the uterine orifice were soft and yielding. The head was fixed in the brim of the pelvis in the first position. During the night the labour pains recurred rather often, and towards morning became more feeble and rare.

On the 12th of May, at 9 a.m., the mouth of the uterus was open one inch. During the day the labour pains were feeble, but towards evening they increased, so that at 11 p.m. the uterine orifice was perfectly dilated.

On the 13th of May, at 3 a.m., the bag of waters broke, and then the labour pains became very violent and frequent. The head entered the pelvic canal, and an hour afterwards appeared between the labia majora; quarter of an hour after that the head was quite expelled, and the child immediately began to cry. I waited about five minutes, but as the trunk, in spite of the labour pains, was not delivered I placed my finger under the left arm of the child and carefully extracted it. The boy was well developed, weighed about six pounds, the dimensions of the head were: occipito-mental diameter, 5 inches; occipito-frontal, $4\frac{1}{2}$; bi-parietal $3\frac{1}{2}$. Twenty minutes after the birth of the child the placenta was expelled; it weighed a pound.

The umbilical cord was thick and seventeen inches long; the rupture of the membranes of the ovum was five inches in length, and its margins were four and eleven inches from the placenta. Four hours after the birth the child was put to the breast, which it sucked heartily. In the evening the mother shivered slightly and had headache; during the night she slept well, and on the following day she was in tolerably good health.

On the fourth day after birth she had a fit of shivering, was feverish and had a headache; at the same time her breasts considerably augmented. The patient began on the following day to recover, and on the ninth day after birth was out of bed.

Case 4.—Professor C. Braun, in Vienna, induced premature labour by my method in the following case. On

the 1st of June, 1861, a pregnant woman (3129, Marie Ketschner) entered the general hospital (Allgemeines Krankenhaus). She was twenty-two years of age, of very low stature, unusually thin, her complexion was excessively pale, her cheeks hollow, her face indicated pain. Since she was eight years old a large posterior curvature of the spine had been forming (kyphosis). On measuring the pelvis it was found that conj. extr. $= 6\frac{1}{2}$ inches, c. vera. $= 3\frac{1}{4}$, d. troch. $= 9$, and d. cr. il. $= 11$ inches. This considerable narrowness of pelvis was an indication to induce premature labour.

On the 18th of June, at 7 p.m., in the thirty-second week of pregnancy, five ounces of warm water were injected; an elastic tube was introduced three inches into the cavity of the uterus, soon after the injection labour pains began; at 11.30 p.m. the bag of waters broke, and at 3.30 a.m. a live child was born. It weighed $2\frac{3}{4}$ pounds, and was sixteen inches long. The parturition was normal; but the anæmic and exhausted state to which the patient was reduced even before confinement was, after delivery, brought to a complete collapsus.

On the 19th of June the patient died under symptoms of dyspnœa. By a post-mortem examination the kidneys were found to be atrophic; under their capsules were cysts; in the upper part of the vagina was a thrombosis.

In the opinion of Professor Braun the bad result did not in the least depend upon the method of operation, but was the consequence of the sickly state in which the patient was previous to her confinement; the method of operation, however, appeared to be satisfactory and efficient, as only one injection was necessary to induce premature labour. The parturition was regular and the child was born alive.

Case 5.—Mrs. G—, the wife of a landed proprietor in the government of Kieff, was married at eighteen years of age, had twice given birth at the normal term, and both times to dead children. A fortnight before parturition she ceased to feel the movements of the fœtus. During her pregnancy she had been in tolerably good health, only occasionally

experiencing a general weakness, sometimes nausea and loss of appetite. At the commencement of August, 1861, she had for the last time menstruation, and about the middle of December she felt the movements of the fœtus; consequently at the end of April, 1862, she ought to have been confined.

On the 16th of March, 1862, I found Mrs. G— in the following state: She was thirty years old, of middle stature, fair complexion, rather thin and pale. By auscultation of the vessels of the neck I heard a considerable noise. The lungs and heart were healthy, and in the rest of the organism I discovered nothing abnormal. The abdomen was symmetrically enlarged, and the right side of it was distinctly felt the trunk of the child; below on the same side the pulsations of its heart were heard—135 per minute, and below on the left side the uterine murmur was audible; on the left side above the abdomen the feet of the child were easily felt. By internal exploration I found the anterior fornix of the vagina rather low, and above it was the head of the child. The vaginal portion of the uterus was short, thick, and soft, the finger easily passed through the abnormal orifice of the uterus, through the canal of the cervix and internal orifice of the uterus, to the membranes of the ovum.

From this exploration I concluded that the fœtus was in the second position of the head, and that eight months of pregnancy were passed.

The two previous births in which the children, without any assignable cause, died a fortnight before parturition, gave rise to apprehensions for the favorable issue, with regard to the life of the child, even in the third pregnancy. To prevent the very probable death of the fœtus I proposed to Mrs. G— to induce premature labour four weeks before the normal term of pregnancy.

On the 28th of March, at 10 a.m., I injected three ounces of water at the temperature of 28° R. Mrs. G— felt the passing of the fluid upwards in the abdomen, and contractions of the uterus speedily ensued. In two hours the labour pains became considerably more violent; 7 p.m. the

waters passed, an hour after that the fœtus was expelled, and immediately began to cry. It was a girl, well developed and weighed about six pounds. The mother applied it to the breast, but the fissures of the nipples and the inflammation of the right breast were so considerable, that a fortnight after parturition she was obliged to renounce the pleasure of suckling the child.

Cases 6 and 7.—Mrs. R—was born of healthy parents. In infancy she was sickly, pale, began to walk when only four years old; she had menstruation for the first time at sixteen years of age; at eighteen she married and soon was pregnant.

In the sixth month of her first pregnancy hæmorrhage occurred without any assignable cause and was arrested by acids; but in a fortnight hæmorrhage returned. The midwife who attended the patient advised her not to have recourse to a physician, but gave her some acid drops herself, and also the hæmorrhage had already continued three weeks, and was not arrested entirely when she allowed the patient to make a journey of seventy versts from Kharkoff in a carriage. A month afterwards the patient ceased to feel the movements of the child and she was brought to bed. The dead imperfect fœtus had taken an unusual position (facial presentation, with the chin directed posteriorly), in consequence of which the patient after pro tracted pains had to undergo a very difficult operation—craniotomy. The physician who made this operation had not the requisite instruments, and performed it with the forceps. After parturition involuntary discharge of urine and metroperitonitis, accompanied by a fever, ensued. I left Kharkoff, and arrived to the patient on the second day of her confinement. She recovered after lying in bed more than a fortnight.

Taking into consideration the difficulty of expelling even a fœtus of seven months, and convinced by an exploration of considerable narrowness of the pelvis, I communicated to the patient's husband the necessity, in case of a second pregnancy, of inducing premature labour. By

this means alone could the child's life be preserved, and the mother exempted from a painful and dangerous operation. Unfortunately my warning was of no avail.

The second pregnancy occurred, and the patient was confined on the 31st of May, 1862. The next morning, after violent and protracted labour pains, the bag of waters broke, and a large quantity of liquor amnii was evacuated. At 11 p.m. I came to the patient. The uterus inclined forwards, and rather to the left; to the touch it was firm. By auscultation I neither heard the fœtal heart nor the uterine murmur. By an internal exploration I found the uterine orifice entirely dilated, and the fœtus in the second facial position. The face of the child was swollen, firmly fixed, but high. The funis, which did not pulsate, was situated between the head and left wall of the vagina. The promontorium measured only three and a quarter inches from the inferior margin of the symphysis pubis. These unmistakable symptoms of the child's death made me resort at once to craniotomy. I perforated the scalp through the frontal suture, discharged the cerebral matter, then applied my cephalotribe to the sides of the fœtal head and compressed it. But as it would not enter the pelvic canal, I applied the blades of the instrument to the face and occiput, and again compressed it. After that it was easily moved, though it was still impossible to extract it. I resolved to turn the child and extract it by the feet. The trunk of the child being entirely delivered, the head was still retained by the brim of the pelvis, and could be extracted only after repeated application of the cephalotribe and compression of the basis of the cranium. The placenta separated without any accident, and the patient in the puerperal state visibly recovered.

Dr. Frankowsky, who was present during the operation, approved of my advice—in case of a new pregnancy to induce labour no later than the thirty-second week of its course.

In the beginning of July, 1864, menstruation appeared and recurred in the beginning of August and of September,

but after the 7th of September it did not recur. The third pregnancy had commenced, and on 25th of January, 1865, Mrs. R— felt the first movements of the fœtus.

On the 4th of May I found her in the following condition: she was twenty-two years of age, of low stature, lean, the muscular system feebly developed, auburn hair, rather pale, but apparently not sickly. The upper part of the trunk inclined backwards, and the abdomen excessively protruded. The left shoulder-blade was somewhat higher and more prominent than the right. The superior portion of the spinal column was curved to the right, and the lumbar portion to the left, and forwards (lardosis). The extremities were regular. I measured with my pelvimeter the pelvis and found the following dimensions:

Spinal ileum ant. sup.	9½ inches.	
Cristæ oss., ileum	10 „	
trochant	10½ „	
Conjugata externa	6 „	
diagonalis	3¼ „	
vera	2¾ „	
From promontory to extremity of coccyx	3 „	
Symphysis pubis	1 „	6 lines.
Distance between tubera ischii	3 „	6 „

The sacrum was low in consequence of the great depth of its course: the inferior half of it was directed considerably forwards. The coccyx was movable, and when bent backwards its distance from the arch of the pubis measured four inches.

The abdomen was large and protruded forwards chiefly on the left side above. On touching the uterus, its walls appeared much distended with liquor amnii; the fœtal head could be felt below the abdomen on the left side. Below the right of the abdomen the pulsations of the fœtal heart were audible—140 per minute; on the same side, a little lower, the uterine murmur was audible.

The patient felt the slight movements of the fœtus above the abdomen, and particularly on the left side. By this external exploration I came to the conclusion that the fœtus

was in the oblique dorso-anterior position, with head upon the os ileum of the right side. On an internal exploration, the walls of the vagina were found to be humid, its fornix rather high and yielding, through its right side the fœtal head could be reached. The vaginal portion was short, thick, clammy; the finger easily passed through the canal of the cervix to the internal orifice, which did not admit the finger-end.

Convinced, the second time, that the extreme narrowness of the pelvis would not admit the head of the mature fœtus, I proposed to Mrs. R— and her husband that it was indispensable to induce premature labour without delay, as she was now in the thirty-fourth week of pregnancy, and considering the narrowness of the pelvis, labour should have been induced even earlier.

On the 5th of May, at 5 p.m., I injected into the cavity of the uterus four ounces of water, temperature 28° R. During injection there was no pain at all, but in two minutes began uterine contractions, which were soon accompanied with slight pains. Having rectified the abnormal position of the fœtus by internal manipulation, and advised the patient to lie on the right side, I left her at 6 p.m. In my absence the labour-pains rapidly increased, so that at 8 p.m. the bag broke and a considerable quantity of liquor amnii was evacuated; a slight hæmorrhage and prolapsus of the funis induced them to send for me. I found the patient lying on her back; the labour pains were rather violent and frequent. The uterus, on account of the discharge of liquor amnii, was uniformly unyielding, of an oblong form, rather inclined to the left, and considerably forwards. The pulsation of the fœtal heart was in the former place, but scarcely audible. Introducing the finger into the vagina I found in it the funis, which pulsated feebly. The uterine orifice was perfectly dilated, and contained the left elbow of the child with the prolapsed funis; the head was on the os ileum on the right side.

I introduced the right hand into the cavity of the uterus, rectified the funis, grasped the left foot and extracted it. I

deemed it necessary to extract the child, seeing the danger that threatened it from the pressure on the funis, which had again prolapsed and was pulsating very feebly. While extracting the child the uterus contracted rather energetically; the right arm of the child lay on its breast, and I liberated the left arm with perfect ease. The liberation of the head was so difficult that it contributed much to the death of the child. It was retained by the brim of the pelvis, which had appeared to me more spacious than the right. After an unsuccessful attempt to extract the head with the hands, I immediately applied the forceps and extracted it. The child was stillborn, without respiration; by attentive auscultation could be counted fifty feeble pulsations of the heart per minute; the skin was pale.

The removal of the mucus from the mouth, the irritation of the glottis, the sprinkling of cold water on the epigastrium —had no effect. I had recourse to Marshal Hall's method. After turning the child from the side on the abdomen several times, some mucus was discharged from the mouth, and I observed a slight respiration, and afterwards even the acceleration of the cordial pulsations.

According to Spiegelberg ('Würz. Medic. Zeitschr.,' 1864, b. v, p. 150), I put the child into a warm bath every quarter of an hour, and sprinkled cold water on the epigastrium. On the failure of Marshal Hall's method, I took out of a syringe the piston, introduced the tube of the syringe into the larynx of the child, and alternately inspired air and compressed the chest. After a few inspirations the pulsations of the fœtal heart became much more perceptible and frequent, the skin somewhat more ruddy.

But the success of insufflation was only apparent and not durable, the pulsations soon grew feeble, and at last altogether ceased. Friction with compression of the sides of the chest, a method by which I had often succeeded in reviving a stillborn child, had no effect ('Cobpeineusseur Meguezuna,' 1860, No. 11; 'Contemporary Medical Gazette'). For two hours I made the above-described efforts to revive the child. Its death was caused by the

suspension of the oxygenation of blood, and the escape of carbonic acid, in consequence of the pressure of the funis and long retention of the head. Twenty minutes after the birth of the child the placenta was delivered, which was only one inch from the rupture of the membranes. The mother convalesced uninterruptedly. The child was a boy, seventeen inches long, weighing about five pounds; it appeared to be well developed.

Mrs. R— and her husband were fully convinced of the beneficial effect of inducing premature labour, and accused themselves of resorting to this operation rather late. If labour had been induced a fortnight earlier the child's head would have passed without obstruction through the pelvic canal.

The oblique position of the child with the funis prolapsed was very unfavorable to the child's life, but by being turned in time, before the discharge of liquor amnii, and the head being more easily liberated, the child would undoubtedly have been extracted alive.

Mrs. R— soon recovered after parturition, but menstruation at the usual term did not recur, in consequence of another pregnancy.

On the 23rd of October, 1865, she felt the movement of the fœtus. On the 4th of January, 1866, in the thirty-first week of pregnancy, I attended her to induce labour. The abdomen protruded excessively forwards, its maximum circumference was thirty-five inches. The fundus uteri was inclined to the left and forwards. The trunk of the child was placed obliquely from left to right, and from above below. The head was on the right side below. The sounds of the fœtal heart were audible on the right side, 144 per minute; on the same side, somewhat lower, the uterine murmur was audible. By internal exploration I found the vaginal portion of the uterus short, directed backwards; through the canal of the cervix I reached the membranes of the ovum, and on the right side could touch the child's head. It was not difficult to ascertain that the position of the child was second oblique.

At 1 p.m. I injected four ounces of water, 28° R. Soon afterwards slight pains occurred below the abdomen. By manipulation I corrected the position of the uterus, and advised the patient to lie on the right side. The labour pains grew by degrees more violent.

At 10 p.m. the uterine orifice was completely dilated, the bag of waters projected considerably into the vagina; the head was movable above the brim of the pelvis. I ruptured the membranes; a large quantity of waters was discharged, and the head entered the pelvic canal, the occiput being turned to the left and forwards.

Half an hour after the rupture of the bag the child was born, and immediately began to cry rather loud. It weighed about five pounds, its skin was ruddy; it sucked the finger well when put into its mouth, but it lived only some hours. I observed that he grew weak in a very short time after being put into the bath, which was too warm.

The placenta was delivered twenty minutes after the child's birth. The patient speedily convalesced.

Case 8.—Matrona Bachmourowa, a poor woman, had in her fifteenth year for the first time menstruation, and had since suffered from hysterics. A few years afterwards she had caught syphilis, and having touched with her finger, stained in the vaginal mucus, the left eye, conjunctivitis, and subsequently Irites syphilitica were formed in it. After an operation Iridectomy atrophia bulbi in the left eye ensued. In 1862 she had laryngitis crouposa, and was saved by tracheotomy; then she suffered from granular vaginitis. In the same year she was married to a negro. On the 22nd of January, 1864, she was confined in the lying-in hospital. The parturition lasted two days, but terminated favorably. On the 28th of October in the same year she miscarried, in the fifth week of pregnancy. The day after her miscarriage she had intercourse with her husband, and felt violent pain below the abdomen; since that time she had suffered from frequent desire to pass water, and from pain in micturition. On the 29th of

November she again entered the lying-in hospital, having ante-flexion of the uterus, inflammation of its mucous membrane, and cystitis.

It was remarkable that the patient, during internal exploration, complained of considerable sensitiveness in that part of the anterior wall of the pelvis which touched the fundus uteri. Above and below this place the patient felt no pain. By exploring with the speculum the sensitive point, the mucous membrane of the vagina was swollen, and of a bright red colour. The urine sometimes was retained by the spasms of the urethra, and was discharged by the catheter. The difficulty of micturition and pain below the abdomen lasted about a month.

In the month of March, 1865, she was again pregnant. In June, during hysterics, she fell out of the window of the second story, without injury; and in October, wishing to get some water out of a tub, she leaned over the side, and, losing the centre of gravity, fell head foremost into the tub, out of which she was drawn by some men who ran to her assistance. After this accident a menorrhagia occurred, which lasted several days, and micturition became more painful and difficult.

The patient felt the kicking of the fœtus at the end of August.

On the 11th of November, 1866, she entered the lying-in hospital of the University of Kharkoff. She was then twenty-eight years of age, considerably protruded; the fundus of the uterus almost reached the ensiform cartilage and was rather inclined to the right. By palpation and auscultation of the abdomen it was evident that the child lay in the first position of the head. The inferior section of the uterus was so low that the short, thick, and flaccid vaginal portion was only one inch from orifice of the vagina. Through the anterior fornix of the vagina the child's head, which was low, could be touched. On the anterior wall of the vagina was formed an œdematous tumour, very sensitive to the touch. The urine passed with difficulty and pain, and was acid, of a reddish-yellow colour, with sediment;

through the microscope could be seen crystals of ammoniaco-magnesian phosphate, a small quantity of uric acid, and red sanguineous globules. The menorrhagia again recurring, and causing considerable anæmia, was stopped by acid phosphor dilut., but the pain and scalding caused by micturition, sometimes a complete retention of urine, with frequent attempts to discharge it, were not relieved by the usual remedies. At last the irritability of the sensitive and motor nerves of the bladder became so great, that the patient suffered day and night; hysteric fits recurred very frequently. Ascribing the disorder of the bladder to the pressure upon it and the urethra by the child's head, being low, I determined to induce premature labour.

On the 3rd of December I injected sixteen cubic inches of water, 28° R. The patient soon felt slight pains below the abdomen, and in the night the labour pains grew more violent. At 2 a.m. the uterus was dilated one inch; at 7 a.m. the waters passed, and an hour later the child was born in the first occipito-anterior position. It was alive, a girl, weighing six and a half pounds, and rather well developed.

After parturition, although the urine passed more freely and without the catheter, it was for a long time attended with pain. The patient remained in the hospital a month afterwards, during which an abscess formed on the labium of the left side.

Case 9.—Mrs. D—, the wife of a landed proprietor, had for the first time menstruation at fourteen years of age; which ever after was attended with considerable pain below the abdomen, continuing four days, and very abundant. Besides, she had a few days previous to menstruation and after it, the fluor albus. Mrs. D— at the end of December, 1865, had a last menstruation, and in the middle of May, 1866, she felt the movement of the fœtus. At the commencement of pregnancy nausea and vomiting troubled the patient; constipation of the bowels, which lasted two and even three days. Incontinence of urine, and especially muco-purulent vaginal discharge, made the patient apply to me.

At the beginning of August, 1866, I found her in the following state. She was twenty-two years of age, of middle stature, feeble constitution, lean and anæmic. Her spine was rather curved in the dorsal part to the right and backwards, and in the lumbar it projected considerably forwards and a little to the left. The abdomen was large, and protruded especially above the navel; the fundus of the uterus reached the epigastrium, and was inclined to the right.

On the right side of the uterus the child's body could be felt; below it the head, and on the left above, the legs. On both sides above lig. Poupartii a slight uterine murmur, and on the right below the abdomen the sounds of the fœtal heart were audible. The anterior fornix vaginal was low and spacious, and high above it the head of the fœtus was movable; the vaginal portion of the uterus declined considerably backwards, was soft, half an inch long, and admitted the finger to the internal orifice still undilated.

By compressing the perinæum, the finger easily reached the promontory. Having measured the pelvis I obtained the following results:

D. sp. . . .	9 inches.
cr. . . .	10 „
conjug. vera . .	3½ „
D. ichii . . .	3 „

Circumference of the pelvis 25 inches.

The pubic arch was rather wide. The anterior wall of the pelvis was one inch and a half high, and the posterior three and a quarter. Convinced of the existence of a narrow rickety pelvis, with the consent of Mrs. D—, I induced labour in the thirty-sixth week of pregnancy. During the month of August were employed fortifying remedies, warm baths, and daily injections of water of 24° R. into the vagina, after which the fluor albus considerably diminished.

On the 31st of August, at 8.30 p.m., I injected four ounces of water 28° R. Immediately after injection, Mrs.

D— felt the passing of fluid upwards in the abdomen, and slight pain in the epigastrium. By this the uterus became more firm to the touch. In a few minutes the patient complained of a pain below the abdomen, and at the same time the injected fluid flowed out of the cavity of the uterus. The labour pains were, at first, scarcely perceptible and rare, but by degrees in the night they were more frequent.

At 9 a.m. I found that the vaginal portion had completely disappeared; the uterus was dilated half an inch; the head was fixed on the brim of the pelvis in the second occipito-anterior position. During the day the labour pains were very rare and feeble. At 8 p.m. I again injected. The labour pains grew more violent. At 6 a.m. the waters passed, and at 8.30 a.m. a live male child was born, weighing about six pounds. The placenta was soon expelled. On the ninth day after parturition Mrs. D— left her bed.

Case 10.—Mrs. K—, æt. 30, of dark complexion, middle stature, weak constitution; but in infancy and before marriage had enjoyed tolerably good health. At seventeen years she had, for the first time, menstruation, which ever afterwards recurred regularly, and lasted about three days. At twenty-nine she was married. About the middle of January, 1866, she had last menstruation, and in the beginning of June she felt the first movement of the fœtus.

The pregnancy was undisturbed until the 30th of August. On that day the patient felt pain on the right side of the abdomen, and particularly below it; the pain was acute and almost incessant. By degrees she fell into a feverish state, which, together with the pain, lasted three days, notwithstanding the various remedies: local narcotics, chloroform, leeches, and emulsia oleosa c. nitro. On the fourth day of her illness the pain and fever considerably abated. On the fifth day, in the evening, having eaten many nuts, she felt a burning in the epigastrium; soon after that a pain in the abdomen with fever ensued. During

the whole night and the next day the patient was extremely restless; she suffered from violent pain in the abdomen, burning in the epigastrium, nausea, vomiting, and intolerable thirst. Various remedies were used, especially laxatives and clysmata, but she was not relieved by them.

On the 4th of September, at 2 p.m., I was summoned by the desire of my colleague, Professor Zaroobin, who had before treated her.

The patient lay in a very restless state, groaned, and even screamed. Besides, she was very feeble; her pulse was quick (140) and weak; her skin entirely covered with a cold clammy sweat; her tongue dry and furred. The patient complained of the above-described symptoms. The constipation had lasted three days. Since the morning the patient had not felt the movements of the fœtus. The abdomen was large, the right side more prominent than the left. The uterus was oblique, oval, and inclined towards the right side; its fundus was four fingers higher than the navel; the trunk of the child lay rather obliquely—the head below the abdomen, the legs above on the right. By attentive auscultation I heard below the abdomen, on the left, very feeble pulsations of the fœtal heart, and on the right slight uterine murmur in the place where the most violent pain was concentrated, and which was most sensitive to the touch. The vaginal portion of the uterus rather deviated to the right and backwards; it was about one third of an inch in length; the finger could pass through the canal of the cervix to the internal orifice, which was closed. The presenting part was the head. Notwithstanding the remedies again used—laxatives, clysmata, &c.—the health of the patient did not improve.

At 9 a.m., by attentive auscultation of the abdomen, neither the uterine murmur nor the pulsations of the fœtal heart, nor the movements of the fœtus, could be heard. At 5 p.m. vomiting took place. The abdomen was distended; the tone, in places corresponding with the bowels, was tympanic. On touching the abdomen, considerable

pain was caused, particularly on the right side below, where the uterine murmur was before audible.

The pulse during the whole time was no less than 120 per minute; the urine was of a reddish colour. Judging from the locality of the pain and other symptoms, we concluded that, in this case, the patient suffered from an acute inflammation of the uterus, especially on its right side, where the placenta was attached, with placentitis and perimetritis; besides symptoms of constipation.

The consequence of the inflammation of the placenta was the death of the fœtus, which was probable on account of the absence of the fœtal movements, the gradually diminishing pulsations, together with decreasing uterine murmur. By internal exploration it appeared that the entrance into the pelvis was occupied with the head and right shoulder of the fœtus. These parts, while the patient lay on her back, were almost immovable, but when she turned on her left side they were free.

The failure of the remedies employed against constipation led us to suppose that it might depend partially on the pressure of the presenting part of the colon. There was reason to hope that the inflammation which threatened to spread over the whole peritoneum would pass after the evacuation of the uterus; at length, when it was evident that the fœtus was dead, its speedy expulsion was desirable.

At 8 p.m., in the presence of Professor Faroobin, I injected four ounces of water, 28° R., and the contraction of the uterus immediately ensued, accompanied with slight pain in the epigastrium. The labour pains soon became violent, and their action was so successful that at 11 p.m. the orifice of the uterus was completely dilated, and the bag of waters broke. The head entered the pelvic canal, the occiput being turned to the left and forwards. At 2 a.m. was born a dead girl, weighing about five pounds. Unfortunately I could not make an autopsy. The placenta was soon delivered. Soon after parturition, Mrs. R— felt considerable relief; on the right side the pain abated; but through the abdomen we could by percussion determine the

existence of a stercoral tumour. A clyster of castor oil and another of aloes were employed, after which the patient had a very abundant stool.

On the day of parturition, and the next day, the pulse was 120; the extremities were cold; the right inferior part of the abdomen was very sensitive to the touch.

On employing internally almond emulsions, and on the abdomen collodium and tinct. Iodii, the patient gradually improved.

On the 6th of September the pulse was fuller, and only 108 per minute; the extremities were no longer cold; the pain on the right side disappeared.

Fortifying remedies were used, and the patient considerably improved, and she was troubled with nothing but a bronchitis.

An examination of the placenta corroborated the diagnosis with respect to its inflammation.

According to my request, Professor Chrjonshchewsky carefully examined the placenta through the microscope, and came to the following conclusion:

In this case a *placentitis interstitialis chronica* was slowly and gradually developed, which terminated in a cicatrised tissue, and fatty transformation with a calcareous deposit. The consequence of this process was an obstruction in the circulation of the blood through the capillaries of the villi. To this was subsequently joined *atheromatous* process in the arteries of the funis, and finally thrombosis of its vein, causing the death of the fœtus.

In this case I was more than convinced of the justice of my proposition (Uscurogobaniesjcuboma Sepernesioexz. Exploration of the abdomen of pregnant women. Kharkoff, 1865, p. 143) that "if the place of the pain corresponds with that of the uterine murmur, we may conclude that the placenta is hyperæmic or inflamed." In this case, also, was corroborated my other proposition (l. c., p. 144) that "the abatement or disappearance of the uterine murmur may sometimes indicate the danger to which the life of the child is exposed."

Cases 11 and 12.—Mrs. L—, an Italian by birth. At fourteen years of age, she had for the first time menstruation; at nineteen she was married.

In 1860, at twenty-one, she gave birth without any accident; afterwards she miscarried in the second half of pregnancy, during an attack of epilepsy. The third time she gave birth at the normal term, in a violent epileptic fit, during which the patient almost strangled the child, unconsciously grasping its neck. The fourth pregnancy commenced in 1864. On the 6th of July, in the same year, she had her last menstruation. In the course of her pregnancy, epileptic fits became more frequent and violent. About a day before a violent attack, the patient usually observed that her sight grew dim, her eyes emitted sparks, she had illusions and headache.

The patient had been treated by several surgeons in Petersburg, and afterwards at Kharkoff. According to the advice of my colleague, Professor Sambl, she requested me on the 12th of March, 1865, to induce premature labour, in order to anticipate the epileptic fits, which had previously occurred during parturition.

The patient was twenty-eight years old, of very weak constitution, and dark complexion. The abdomen of the patient protruded considerably forwards and to the right, on account of the inclination of the uterus, the fundus of which was near the epigastrium. The body of the child lay in an oblique position, and was turned with the back forwards and to the left; the legs were on the right side of the abdomen above—there the movements of the fœtus were distinctly felt. On the left side of the abdomen the sounds of the fœtal heart, and the indubitable funicular murmur were audible; the uterine murmur was on the right side below the abdomen. The short vaginal portion was turned backwards and to the left. At 4 p.m. I injected six ounces of water, 28° R., after which the labour pains soon began. The child took the first occipito-anterior position. At 8 p.m. the waters passed, and at 9 a well-developed girl was born, who is still alive. The patient

had no epileptic fits during parturition or the puerperal state. Afterwards the epileptic fits by degrees returned; but having employed fortifying medicines, especially ferrum, they became more feeble and rare, and the patient visibly recovered.

In the middle of July, 1866, another pregnancy occurred, in the course of which the epileptic fits became frequent and violent. At the commencement of February, 1867, during a violent epileptic fit, the patient fell from a chair on the floor; at the same time threw down a lighted candle, which burnt her nose and right hand to the bone. The patient would have continued to burn, had not her husband, who was in an adjacent room, and hearing her snoring, ran to her assistance.

The epileptic fits, growing more frequent and violent, served as an indication to induce premature labour. I found the patient very weak, her mind in an unsettled state; she entreated me to induce premature labour. The uterus was inclined forwards; the fœtus lay longitudinally; its movements could scarcely be felt after the epileptic fit, during which the patient fell from the chair and burnt herself. The fœtal pulsations were very feeble, 120 per minute, on the left side below the abdomen. After warm baths and injections of warm water, and after fortifying remedies (Infus. Chinæ fr. par.), I injected on the 19th of March, 1867, at 4 p.m., four ounces of water, 28° R. The patient distinctly felt the passing of the water upwards in the direction of the anterior wall of the uterus. The labour pains immediately began. The fluid flowed back one hour after injection. On the following evening, at six o'clock, the waters passed, and at nine a boy was born.

On account of the distance I could not visit the patient on the day of parturition, and saw the newborn child on the next day. It was well developed, but its face was swollen, of a bluish-red colour; the conjunctiva of its eyes were red, and its voice was feeble. Its pulse was about 80 per minute; the extremities were cold. In the evening of the same day it died. To my regret autopsy could not

be performed, and I did not see the placenta, which was buried on the day of parturition. Probably the violent attack of epilepsy, during which the patient's strength fell, was fatal to the child.

During a fortnight after parturition, the epileptic fits did not recur, afterwards they became rather frequent, but very feeble, only for some seconds the patient lost her consciousness, and the muscles of the face were slightly convulsed.

The above twelve cases of induction of premature labour by injection to the fundus of the uterus will be found in the following table:

No. of case.	Date of operation.	Age of patient.	No. of previous pregnancies.	Indications to operate.	Week of pregnancy.	State of vaginal portion.	Quantity and temperature of water.	No. of injections.	Commencement of labour pains after injection.	Duration of labour hours.	Mode of Delivery.	Result to Mothers.		Result to Children.		
												Recovered.	Died.	Alive.	Still-born.	Dead-born.
I.	1856, Aug. 16. Kieff	24	Primipara	C. v. 3½″; vomiting; death of child	35	V. p. ⅓″, int. or. clos.	6 ounces, 28° R.	2	Immediately	32	Turning	1	—	—	1	—
II.	1856, Nov. 6. Kieff	40	Five. 1 convulsion, — forceps	Eclampsy	34	V. p. ½″, int. or. clos.	6 ounces, 28° R.	1	Immediately	17	Forceps	1	—	1	—	—
III.	1860, May 1. Kieff	26	One. Forceps	C. v. 3½″	36	V. p. ½″, int. or. op.	6 ounces, 28° R.	1	Immediately	36	Natural	1	—	1	—	—
IV.	1861, June 6. Vienna	22	Primipara	C. v. 3¼″	32	—	5 ounces	1	Soon	8¼	Natural	—	1	1	—	—
V.	1862, March 28. Kieff	30	Two. 1 and 2 dead-born children	Death of child at the termination of pregnancy	36	V. p. ½″, int. or. op.	4 ounces, 28° R.	1	Immediately	10	Natural	1	—	1	—	—

VI.	1865, May 5. Kharkoff	22	Two. 1 and 2 cephalotripsy	C. v. $2\frac{3}{4}''$	34	V. p. $\frac{1}{4}''$, int. or. clos.	4 ounces, 28° R.	1	Immediately	$3\frac{1}{2}$	Turning forceps	1	—	—	1	—
VII.	1866, Jan. 5. Kharkoff	23	Three. 1 and 2 cephalot., 3 premat. labour	C. v. $2\frac{3}{4}''$	30	V. p. $\frac{1}{4}''$, int. or. clos.	4 ounces, 28° R.	1	Immediately	10	Natural	1	—	1	—	—
VIII.	1866, Dec. 4. Kharkoff	28	Two. 2 abortus	Cystitis	36	V. p. $\frac{1}{2}''$, int. or. op.	4 ounces, 28° R.	1	Some hours	20	Natural	1	—	1	—	—
IX.	1866, Aug. 31. Kharkoff	22	Primipara	C. v. $3\frac{1}{2}''$	36	V. p. $\frac{1}{2}''$, int. or. clos.	4 ounces, 28° R.	2	Immediately	36	Natural	1	—	1	—	—
X.	1866, Sept. 4. Kharkoff	27	Primipara	Metro-peritonitis; death of child	34	V. p. $\frac{1}{2}''$, int. or. clos.	4 ounces, 28° R.	1	Immediately	6	Natural	1	—	—	—	1
XI.	1865, March 13. Kharkoff	28	Three. 2 abortus, 3 epilepsy	Epilepsy	36	—	6 ounces, 28° R.	1	Soon	5	Natural	1	—	1	—	—
XII.	1867, March 19, Kharkoff	30	Four. 2 abortus, 3 epilepsy, 4 ind. of prem. labour	Epilepsy	36	V. p. $\frac{1}{4}''$	4 ounces, 28° R.	1	Soon	29	Natural	1	—	1	—	—

Conclusion.

Of the twelve cases described above, ten required only one injection; in the first and eighth a second injection was made, only to *increase* the labour pains.

The water injected was warm, 28° R.; with regard to quantity in the first three cases and in the ninth, six ounces; in the fourth five ounces, and in the remaining seven cases four ounces.

Immediately after injection the labour pains commenced; only in one case they took place after the lapse of a few hours.

The labour continued from three and a half to thirty-six hours; their mean duration from the time of injection to the termination of labour was about nineteen hours.

The result was, in all cases, favorable to the mother, except in the fifth, when the death of the patient was by no means caused by the operation, but by the previous illness.

Of the children, nine were born alive, one stillborn, and two died before the operation.

In all cases the aim of the operation was either partially or fully attained.

In the first case vomiting ceased after the operation, and the patient fully recovered.

In the second case convulsions ceased after the operation, and the patient convalesced.

In the third and ninth cases, though the pelvis was narrow, the parturition was normal; the mothers and children have since enjoyed good health.

In the fourth case, though the pelvis was narrow, the child was born alive, and the mother died of a disease unconnected with the operation.

In the fifth case the operation was most successful, the child being born alive, while in the two former pregnancies the fœtus died a fortnight before parturition.

In the sixth and seventh cases, the pelvis being exceed-

ingly narrow, and in two previous births cephalotripsy having been performed, by induction of premature labour, a stillborn child in the former (sixth) case was extracted with the forceps, and in the latter (seventh) a boy was born who lived for several hours.

In the eighth and tenth cases the aim of the operation was attained, for after parturition the symptoms of disease diminished.

In the eleventh and twelfth cases the operation was successful, because the parturition was normal and without epileptic fits, which considerably abated, and even, for a long time, ceased after birth.

In the majority of cases no preliminary measures were taken, and even no bath was used, except in the twelfth case; but attention was always paid to the state of the bowels.

In all cases the operation was made with the greatest ease, without causing pain, and in five cases the patient felt the movement of the fluid in the abdomen, and sometimes a slight momentary pain in the epigastrium.

Dr. Greenhalgh said he had listened with great attention to the paper of his distinguished friend, whose absence he deeply regretted, inasmuch as he differed from the author in many of the views contained in his communication. For instance, he was not aware that the fundus of the uterus was more largely supplied with nerves than other parts of that viscus; and until that was demonstrated he was not prepared to admit that that portion of the uterus was more sensitive and more alive to any exciting cause than other parts of the organ. He considered that so far from the fundus being less exposed to irritation than the cervix during pregnancy, it was much more so, owing to the position of the fœtus, and the almost constant movement of its limbs throughout a great period of pregnancy. Upon the assumed greater sensitiveness of the fundus over other parts of the uterus the author appeared to base his recommendation that in the induction of artificial premature labour our endeavours should be to arouse the excitability of the fundus, to which end he recommends the injection of fluid. Dr. Greenhalgh considered that it was far more rational to imitate nature as nearly as possible; and as labour was initiated by certain changes taking place in the neck, which by reflex action caused contractions of the body and fundus,

of the uterus, our first aim should be to set up irritation in, and subsequently to secure dilatation of, the neck—a plan he had pursued for many years with the best results. Nor did he consider the injection of water into the uterus unattended with risk. In one case—the only one in which he had had recourse to that method—alarming symptoms followed; and he had been informed by a former president of this Society of another case in which the death of the patient ensued—a lady in whose case he had twice brought on labour prematurely by puncturing the membranes. With the sponge tent, and ergot in repeated doses, he (Dr. Greenhalgh) had never failed to bring on and terminate labour safely. In some few cases where the membranes were very tough he had deemed it expedient to evacuate the liquor amnii after partial dilatation had been effected, so as to expedite labour.

Dr. Meadows regretted very much that so little time was left for the due discussion of this paper, which he regarded as one of great value and importance. He believed it would be found that the views propounded by Professor Lazarewitch, in regard to the physiological action of the uterus in the commencement of labour, were more correct than those advanced by Dr. Greenhalgh. He felt convinced that, as regards the uterus in natural labour, contraction of the fundus or of the body, or both, preceded any change in the condition of the os and cervix; and the fact stated by Dr. Greenhalgh, that dilatation of the os was the first apparent sign of the commencement of labour, must, he thought, be regarded as proof of some antecedent action above that part. For it was obvious that contraction of the os and cervix was antagonistic to dilatation. Holding this view, therefore, and believing that separation of the membranes from the uterus and subsequent contraction of its upper part were the earliest steps adopted by nature for the accomplishment of labour, he was inclined to agree with the author of the paper in the practice he had recommended. He could not regard the operation as one involving such dangerous consequences as had been suggested; for he had injected the uterus under these circumstances many times, and had never seen any evil results. He had been struck with the facility with which Professor Lazarewitch's operation could be performed; and he should certainly adopt it when opportunity offered.

Dr. Murray showed a syringe which Professor Lazarewitch had given him nearly similar to the one just described. With it he (Dr. Murray) had induced labour at the eighth month, in the case of a patient who had a considerable lateral curvature of the spine and a small pelvis. Two injections of warm water were used, and labour began a few hours after. The result was favorable to both mother and child; and he considered the method now described not only new and interesting, but also of much value.

NOVEMBER 6TH, 1867.

Dr. J. HALL DAVIS, President, in the Chair.

Present—50 Fellows and 11 visitors.

Gentlemen admitted as Fellows: Dr. Llewellyn Williams; Dr. Heywood Smith; and Mr. Charles P. Langford.

Having signed obligation paper—Dr. W. H. Harris, of Madras.

The following gentlemen were elected Fellows of the Society: Dr. Baker, of Liverpool; Dr. H. Basan, the Marylebone General Dispensary; and Dr. C. Fryer, of Manchester.

The PRESIDENT congratulated the Fellows upon the prospect of their having a library, reading-room, and museum of their own, which would be ready for use at the commencement of the coming year.

Dr. BARNES exhibited a series of photographs illustrative of Face Presentations.

CASE OF IMPERFORATE ANUS IN WHICH THE CHILD LIVED UPWARDS OF TEN WEEKS WITHOUT RELIEF FROM THE BOWEL AFTER TWO UNSUCCESSFUL OPERATIONS.

By W. F. CLEVELAND, M.D.

Mrs. R—'s infant, a male, was born on April 22nd, 1867. During the first two or three days the nurse did not notice anything unusual in its formation, but was led to observe

that it had no anus, from the urine being coloured by the meconium. When five days old, an attempt was made by a surgeon to reach the bowel, but without success. The child was then admitted into Charing Cross Hospital, under Mr. Canton, when Mr. Barwell passed a small-bladed knife up in the natural direction of the gut for about an inch and a half; and on introducing the finger it gave him the impression that the bowel had been penetrated. After waiting some days, and no fæces being passed, the child was taken home.

On the 13th of June, when the child was just two months old, it first came under my notice, and presented the following appearance:

It had a distressed and aged countenance, but withal a brightness of the eyes that indicated vital tenacity; the upper part of the body was much emaciated; the abdomen greatly distended, pear-shaped, the left side being slightly fuller than the right; superficial veins enlarged; girth round umbilicus nineteen inches; for the most part dullness on percussion. Pelvis thin and shrivelled. There was a small cicatrix about the natural position of the anus, and about an inch higher, and towards the point of the coccyx, another somewhat larger cicatrix indicating the places where incisions had been made. There was no fulness or bulging in this locality, pointing out the probable extremity of the intestine.

Although the child had restless nights, it did not appear to have suffered much pain, and from this circumstance chiefly the parents had resolved to withhold their consent to any further operation.

The mother had nursed it, but on a few occasions when the supply of breast-milk was short, the child had been fed on biscuit food, and would have taken more than was given it.

A mixture containing a few drops of laudanum with compound tincture of cardamoms, was ordered to be taken occasionally at bedtime, and breast-milk only to be given.

June 20th.—During the last week there has been less

enlargement of the abdomen than might have been expected. The anodyne has acted favorably. Sketch (fig. 1, p. 206) taken to-day. Child eight weeks and three days old. Urine passed freely, light in colour, of acid reaction, free from albumen; not sufficient collected to ascertain specific gravity.

28th.—The child emaciates and shows marked expression of suffering. The measurement round the umbilicus is $20\frac{1}{2}$ inches.

July 3rd.—The child gets thinner and weaker. There has been vomiting of a yellowish bilious fluid.

9th.—The child died suddenly last evening.

Post-mortem twenty hours after death.

Decomposition rapidly advancing.

A good deal of passive serous effusion on surface of intestines; great general distension of them, so as to push the liver high up into the chest. Large intestines, especially transverse and descending colon, and rectum enormously dilated.

Rectum pyriform in shape, very heavy and solid, with fæcal matter measuring five inches in length by three in diameter. Intestines full of semisolid homogeneous fæces of light mustard colour.

On tracing the rectum for its termination, it appeared to descend in the mesian line, and on laying it open, a probe could be passed at its lowest extremity, through an aperture large enough to admit a crowquill into the posterior part of the neck of the bladder, about a quarter of an inch above the urethral opening (fig. 2).

The bowel was greatly hypertrophied, and resembled a thick leathern sac; lining membrane smooth.

The stomach was small. Spleen of natural size.

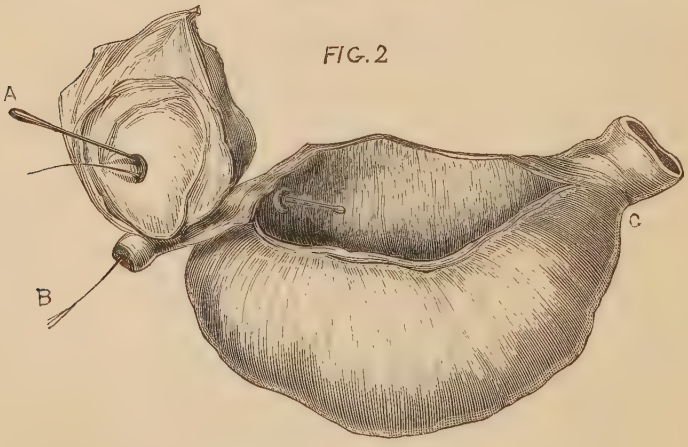
Kidneys rather large, and of coarse texture.

The child lived ten weeks and four days.

Remarks.—As far as I have been able to ascertain, this case is unique in some respects. We have an opportunity rarely afforded of seeing how long, and to what extent, intestinal obstruction, if its seat be in the lower part of the

FIG. 1

FIG. 2



A. Probe passed through communication between bladder and rectum, both laid open, the former inverted.

B. Bristle passed through urethra into bladder half inch below opening leading into rectum.

C. Termination of colon into rectum, the latter enormously dilated, coats much thickened.

canal, and if it be uncomplicated with inflammation, may exist without giving rise, except towards the termination of life, to sickness or other marked constitutional disturbance.

In the hypertrophy of the rectum we see an effort made, though ineffectually, to overcome this obstruction probably analogous to that observed in the left ventricle of the heart in constricted aortic orifice; while the thickened coats of the bowel of course diminish or prevent the risk of rupture, with its fatal consequences, that would exist if there were only simple dilatation.

Dissection explains what was supposed to be doubtful during life, viz. that some of the meconium was voided through the bladder; and in a future case such a circumstance might be of service in determining the probable success of an operation. The annexed drawings were made by my friend Dr. Westmacott.

ON THE CONDITION OF THE UTERUS IN OBSTRUCTED LABOUR; AND AN INQUIRY AS TO WHAT IS INTENDED BY THE TERMS "CESSATION OF LABOUR PAINS," "POWERLESS LABOUR," AND "EXHAUSTION."

By J. Braxton Hicks, M.D., F.R.S., F.R.C.P. Lond.,

CO-LECTURER ON MIDWIFERY AND ASSISTANT PHYSICIAN-ACCOUCHEUR AT GUY'S HOSPITAL; PHYSICIAN TO ROYAL MATERNITY CHARITY; EXAMINER IN MIDWIFERY AT UNIVERSITY OF LONDON, ETC.

It is not without some hesitation that I venture to bring the following remarks before the profession, not because the subject upon which it treats is unimportant in a practical point of view, but on account of the difficulty of finding a title which should indicate the principal matters to which I desire to attract attention, and on account of the ambiguity which exists in some authors, and of the difference between others respecting the conditions to be discussed, the same term varying in value with each author.

Again, it has been felt that the points which I am particularly anxious to render prominent, have been not altogether overlooked by some; and that while, for the most part, the text books have been silent or ambiguous, it is possible that the facts are already recognised and acted upon by many of the observant in this Society.

Notwithstanding these feelings on my part, I have felt that the whole train of symptoms comprised under the terms "Cessations of the pains," "Powerless labour," and "Exhaustion," are so variously considered by authors, and the whole phenomena not sufficienty apprehended by us in general, that if any effort could be made to clear up the matter it would be valuable as establishing our knowledge on a more definite basis; and this, with the additional facts which will be endeavoured to be brought forward, will, it is hoped, render considerable assistance in guiding us to the management of the anxious cases classed under the above quoted terms.

If when it is asked what is meant by "Powerless labour," we turn for answer to authors on the subject, we find that only a few described it, and that these differ essentially. Thus, referring to the work of our president, Dr. Hall Davis ('Parturition and its Difficulties,' 1865), we find that he understands it as "Defective power in the agents of labour," and it is clear from his explanation in Chapter I, where he points out its various causes and treatment, that he intends it to be understood as irregular and feeble action, but not brought on by long and intense activity on the part of the uterus. (See Appendix, p. 229.) Again, if we consult Dr. Churchill's 'Midwifery,' 1867, we find a totally different state intended. Here it is a uterus worn out by long continued exertion, brought into a state no longer capable of contracting, attended by symptoms of increasing seriousness, and tending rapidly to collapse. He confines it to the *second* stage of labour, whereas Dr. Hall Davis does not so restrict it, indeed the causes he mentions would more frequently (for descriptions of the state see Appendix, p. 235) occur in the *first* stage.

Dr. Hodges alludes to it under the head of Exhaustion. Labour complicated with Exhaustion is the title of the chapter. "In very many instances," he says, "the delivery of the child cannot be accomplished in consequence of the want of power in the uterus, or in the general system. The uterine pains become more and more inefficient, until they are completely suspended, so that the child and mother perish without artificial assistance. This constitutes labour with exhaustion or syncope, the 'powerless labour' of the British accoucheur. It is to be distinguished from inertia or deficient excitement, by the fact that although there is a want of action in both cases, yet where there is a loss of power, stimuli have either no influence over the uterine functions, or such influences are transient and ineffectual." (See Appendix, p. 229.)

And if we turn to the term "Exhaustion," we find great variety of description.

Some, as Dr. Osborne,[1] look upon it as the flagging of the vital powers, and the precursor to collapse. Others, as for instance Dr. Dewees,[2] would look upon it as rather a condition of inertia of the uterus from previous over-exertion; not looking on the state as one of extreme severity, as Dr. Osborne does.

Dr. David Davis[3] thinks the term much misapplied. He is doubtful whether dangerous depression ever comes on within twenty-four hours from mere labour pains. He had never seen it, although, possibly from some other evils, symptoms of exhaustion might arise requiring interference.

Wigand, who has perhaps paid as great, if not greater attention to the abnormal states of the uterine action as any one writer on the subject, gives a chapter on Feeble Pains, wherein he uses the term "Atony," "Asthenia," "Adynamia" of the uterus in the same sense as Dr. Hall Davis does powerless labour as above quoted; not so much referring to it as connected with powerless labour as described by Dr. Churchill.

He divides the case into three classes.

[1] See Appendix, p. 230. [2] Ibid., p. 231. [3] Ibid., p. 233.

In the first two the pains still exist, but are either feeble or irregular, or with long interval.

In the third they are entirely absent, which he calls either Lassitudo, Exhaustio, or Paralysis Uteri.

Again, in looking to other works on midwifery, we find that the serious symptoms called "Exhaustion," by some, and "Powerless Labour," by Dr. Churchill, are considered to spring from contusions caused by the pressure of the child's head. Dr. Blundell so considers it;[1] and it is evident on perusing his lectures that he attributes all the formidable symptoms to the injury done to the soft parts, by the bruising and contusion produced by lingering and laborious labour.

Many authors on the other hand make no allusion to the immediate cause of the untoward symptoms, but merely state the fact generally as the result of laborious labours.

If now we look into the meaning of the term "Cessation of the labour pains," or "that the pains had ceased," we find authors, as a rule, express themselves indistinctly as to the condition of the uterus. Generally we find it said that the pains having continued very severe for some time, the uterine power becoming exhausted, the frequency of the pains decreases, and they become feebler gradually, till at last they cease altogether, and the patient falls into powerless labour, or into a state of exhaustion. No very distinctive symptoms are mentioned whereby the temporary passiveness of the uterus is to be known from that state which leads on to the more serious state, though an attempt is by some authors made to explain, that in one case the exertion has exhausted the *muscular* power of the woman, while in the other her *vital* powers are exhausted.

Dr. Churchill[2] in discussing the reason why the former kind occurring in the first stage is slow in running on to serious mischief, while, in the second stage, the dangerous symptoms arise so much more quickly, professes himself unable satisfactorily to explain the reason. "It may be," he says, "that the first stage is more local, the second a

[1] See Appendix, p. 234. [2] Ibid., p. 235.

more constitutional process; that in the latter, different systems of the body (vascular, nervous, muscular, &c.) are deeply involved."

Dr. Dewees[1] looked upon the subsidence of the pains, after long continued labour, as the result of the over-exertion of the uterus, and that in such a case the failure of the pains was accompanied by the failure of the general strength, as shown by the symptoms which are described as "Powerless Labour" by Churchill.

Dr. Osborne[2] looked upon the occurrence of these symptoms as a sign that the *vis vitæ* is exhausted and greatly reduced, if not irrecoverably, and points out their danger, and the necessity for artificial aid.

This is the general tenor of the observation of authors on the subject. I have been able to find but two Englishmen who seem to have observed the real condition of the patient in obstructed labour, Drs. Murphy and Rigby. Dr. Murphy[3] in his lectures notices the temporary suspension of the activity of the uterus, when any obstacle prevents the exit of the fœtus; and he describes the return of the pains at first with short duration and quickly renewed, then with either increased force, or with a second subsidence, if the obstacle be insuperable. If they continue with renewed force, "the pains are very short, extremely severe, and in their interval the patient still complains of pain and feeling of soreness." He then proceeds, "If the uterus be examined through the abdomen, you will observe a very perceptible difference in the sensation it communicates. It feels almost as hard and contracted during the interval as during the pain; the patient cannot bear the abdomen touched. Besides this alteration in the character of the pains, we have other symptoms, both local and general, to guide us." He then describes the symptoms called by Dr. Churchill "Powerless labour." Dr. Rigby[4] describes it in nearly similar words.

In Velpeau and Caseaux[5] I find no allusion to the sub-

[1] See Appendix, p. 231. [2] Ibid., p. 230. [3] Ibid., p. 238.

[4] "System of Midwifery" in 'Lib. of Pract. Med.' See App., p. 239.

[5] See Appendix, p. 237.

ject. A short notice on irregular pains is given, and Velpeau alludes to Wigand's tetanus uteri.

Having thus, as far as I am able to interpret them, briefly reviewed the opinions of the principal authors on midwifery in this country, let me proceed to indicate what appears to me to be the train of symptoms which occur in a case of labour when free from any cause of obstruction, the fœtus cannot be expelled from the uterus; and to indicate the value to be placed upon these symptoms as a warning of danger, and as a guide to our conduct in the treatment of these cases of dystocia.

But before doing so, I think we shall gain a more distinct appreciation of the value of the symptoms if, as concisely as possible, we pass in review, from our present standing ground, the facts which are admitted to exist in process of natural delivery. And this must be my apology to the Society if in so doing I seem to introduce mere common-places.

Now, the following are taken to be admitted facts, whatever may be the immediate cause of labour:

1st. That when the head of the fœtus presses against the os uteri, reflex irritation is excited, and the uterus contracts in a rhythmical manner for a certain period, so long as the labour is proceeding naturally.

2nd. That when the head escapes through the os, the reflex excitement is increased and more powerful uterine action results.

3rd. That in addition to the simple uterine action, the respiratory and abdominal muscles are called into play, whereby a mechanical pressure is exerted on the outside of the uterus, increasing the effect of its own efforts to expel the fœtus.

4th. That as the fœtus descends the reflex excitement in the same proportion increases, acting on the uterus and on the external muscles just referred to, so that when the head or presenting part has arrived at the vulva the excitement is at its greatest, which, continuing its effects after the removal of the fœtus and the placenta, keeps up the uterine contraction, and thus secures the patient from atony and its effects.

Again, I think it will be by all agreed that, however readily the constitutional effects of the pains pass off when there is a fair interval between each, yet there is with every one a demand on the nervous power of the patient.

Consequently it must follow that the more frequently they occur, the longer they last, and the more violent they become, the more readily and completely they drain the nervous power, and the earlier exhaustion arrives.

Perhaps one is likely to overlook the great demand made on the system by the action of the uterus. But those who have suffered from tenesmus of rectum or bladder can in a slight measure appreciate it, by the recollection of the exhaustion and depression thus caused. When therefore the large area of the uterus is considered, and the enormous power it puts forth,[1] it will not be so difficult to apprehend the nervous force consumed by every vigorous contraction. During the interval, however, in natural cases, no doubt the system is equal to replenish the loss without showing untoward symptoms to any serious extent in the generality of constitutions; but women vary much in this particular: some suffering from exhaustion much more severely than others, and at a much earlier period. And this does not seem to be dependent upon the general muscular power, and what is popularly called strength of constitution; but rather upon the natural power of endurance evinced in mental exercise, and shown by fortitude and vigour of character. Be this as it may, it is notorious that we find a great difference in our patients as regards their power of endurance of prolonged demands on their nervous power.[2]

If, then, the above be admitted as facts, it must necessarily follow, that if instead of the ordinary intermission between the pains these latter are repeated so closely as to leave scarcely any interval, more especially if this rapidly recurring action be continued over a considerable space of time, we should reasonably anticipate that all the sooner we

[1] See 'Edinburgh Monthly Review,' August, 1867, Dr. Mathews Duncan's paper.

[2] See Appendix, p. 231, Dr. Dewees.

should find that the powers of the system would begin to yield.

Still more reasonably should we anticipate the earlier arrival of serious symptoms, if instead of the pains being intermittent, the uterine action became continuous.

Now, if all these points be received, it seems that we have a very clear explanation of the fact referred to by Dr. Churchill and others, namely, that symptoms of exhaustion come on rather in the second stage of labour, *i. e.*, when the head is in the cavity and at the vulva than in the first stage, *i. e.*, while the fœtus is wholly in utero.

As a practical fact, we know that reflex action is but slight before the os uteri is expanded. This is a wise provision of nature whereby the ovum is allowed to develop itself in and to distend the "Corpus uteri" without much chance of its being expelled.

We also know as a practical fact, that till the head has entered the os uteri, the fœtus may remain in utero in actual labour for some days before serious symptoms arise; and that during this time the pains are slight, and as a rule infrequent. But notwithstanding this slow development of the reflex function, and the postponement of the evil hour, I think we are incorrect if we admit that it does not arrive at all, as would seem implied when restricting "Powerless Labour" to the second stage. It must surely have been by most of us observed, and that not infrequently, that the same condition of uterus and of the system has arisen while the fœtus is still in utero. The only difference which I have been able to notice being that the exhaustion-symptoms are slower in arriving; and that the labour is unaccompanied by the forcing pains which belong to the second stage.

These remarks apply for instance to cases of hydrocephalic head; rigid os uteri; spasmodic states of uterine walls, and contracted brim where the head cannot at all enter, &c.

As soon as the os uteri has allowed the head to pass through it we then find an increase in the pains, and this,

as before stated, is more marked the lower the head descends. This is partly owing to the more numerous supply of nerves to the part pressed upon, but also partly to this, namely, that a larger surface of passage is exposed to the irritant the lower it descends.

A third reason may be found in the fact that the soft parts with their nerves are subjected to pressure between two bones. This position at first increases the reflex irritation, and consequently the uterine contractions. After a time if detention ensue the system is affected seriously, first by nervous exhaustion, and secondly by the bruising and sloughing of the soft parts thus compressed.

It is difficult to say how much more effect on the system is produced during labour by the head in the cavity than whilst it remained in the uterus, but judging from the average duration of full labour with injury accruing, it would probably be about ten to twelve times greater; and from eighteen to twenty times as much when the head is impacted at the outlet.

Supposing the head did not present, but some softer part as the breech, arm or leg, then the reflex irritation will be less, and therefore labour will be longer borne than when the head presents, as is well known to be the case. Besides, there is scarcely any injury to the maternal structures done by bruising in these cases, so that the symptoms observable are chiefly if not entirely owing to the irritation and demand made on the nervous system.

As above remarked, it would seem as if in the ordinary intermission of pains in a natural labour, the nervous force, whatever that may be, is replenished without any serious demand on the system; but that when the pains recur closely and each one is of long duration; or if they continue for a longer period than usual, then symptoms of nervous exhaustion are observable in a greater or less degree sooner or later, according to the demand upon the patient and her power of supplying it.

And here it may be remarked that in calculating the demand made upon the nervous system by uterine exertion,

there is a tendency to gauge it by the exhaustion produced by exertion of the voluntary muscles; whereas we should consider that in a great measure the process of labour is carried on by the exertion of the largest involuntary muscle in the body, the supply of whose nerve-force is directly and principally from the sympathetic system, the great nerve of relation whereby the general vital powers are immediately influenced, and impressions made upon the circulation in a much more rapid manner than by the exercise of the voluntary muscles.

That this consumption of nerve-force is the cause of the rise of the pulse, and of the other earlier symptoms indicative of danger, rather than to bruising or injury to the soft parts, as was held by Blundell,[1] seems to be shown by the fact that in the majority of cases of head presentation, when exhaustion had seriously appeared, no symptom of any such injury has subsequently shown itself; and also that in cases, as before alluded to, where the softer parts of the child presented, serious symptoms have arisen notwithstanding; and again, where delivery has been effected after their supervention, the complete subsidence of untoward symptoms after delivery without the evidence of any local mischief, is, it would seem, sufficient to show that the removal of the excitor of reflex irritation is the cause of the improvement; and consequently that the prime cause of the trouble was simply the presence of the fœtus.

From the above considerations, then, it seems fair to assume that the symptoms of so-called "exhaustion" arise from an unusual irritation of the reflex function, causing a greater exaltation of the muscular energy, principally of involuntary fibre; and thus an excessive demand is made on the nervous power of the sympathetic system. This applies to the earlier condition of obstructed labour. It is freely admitted that, later on, when sloughs and other injuries have arisen with or without fœtal putrescence, the symptoms are materially increased.

It was remarked above that if we found the intermitting

[1] See 'Lectures,' supra cit.

but rapid action of the uterus liable to produce serious symptoms, we should fairly expect these would the earlier arise if the pains were continuous.

It is to this point that I now wish to direct attention.

I have constantly found that in those cases of detained expulsion of the fœtus where serious symptoms have already risen, or have done so subsequently (I mean such symptoms as have been tending to the powerless labour of Churchill), and in which cases it is at the same time said that the pains have gone off, that the uterine contraction has not really gone off, but that a state of universal continuous action has been substituted for the ordinary rhythmical pains. The uterus is really more active than ever, but its action is grasping, not expulsive; and in proportion as the true pains die out, so this continuous action takes its place.

It has already been mentioned that the only authors I have succeeded in meeting with who have shown this state of uterus during the intervals of the pains are Drs. Murphy and Rigby. But they do not describe it as extending beyond their cessation of the pains; nor does it appear that they attribute the serious symptoms to the nervous exhaustion so produced, but rather to the injury done to the soft parts and to the inflammation as a consequence.

Wigand in describing the "krampwehen" or spasmodic pains describes the universal contraction of the uterus under the name of tetanus uteri. This, it appears to me, he looks upon as the cause of the detention of the child, and not as produced by the prolonged irritation of labour. He says, among other causes for anxiety, we are to fear when the pulse rises and becomes small and weak. Inasmuch as he classifies it with irregular action, and partial spasmodic conditions of the uterus, as a cause of tedious labour, it is clear that he does not consider it as the precursor and cause of the serious symptoms. More complete quotations may be seen in the Appendix, p 233.

He makes a remark in his chapter on *inertia uteri* (see Appendix, p. 234), "that in the highest grade of this condition

the pains are totally absent, except a small constant universal action in some exceptional cases." These cases, no doubt, belong to the condition now under consideration.

Those authors who have made a separate section of the abnormal condition of the uterine pains have pretty closely followed him.

But I would go further and say, that by whatever cause the labour be obstructed, whether by contractions, &c., of the softer parts or of the bony parts, or by the irregular spasmodic action of the uterus itself, sooner or later the rhythmical pains merge into the continuous action till the latter remains alone; and that when this takes place it is the precursor to the symptoms of "powerless labour," "exhaustion," &c.; the period at which this takes place being, of course, influenced by the susceptibility of the person to reflex excitement and other circumstances to be mentioned below. That as soon as this condition of constant action commences those symptoms gradually commence which have been held as indicative of the necessity for artificial delivery, such as the rise of the pulse, dry tongue, hot skin, &c. And I would also remark that where, after hard labour, these symptoms have occurred, and the pains have been said to have ceased, we shall find the uterus in the state of permanent action; with the rare exception of those cases where the uterus has ruptured or violent mental emotion has subjugated its power.

It must not be from this gathered that the supervention of the serious symptoms is strongly and decidedly marked; on the contrary, as is well known, they are generally slow and insidious in their approach, but, if we watch carefully, the coincidence of the occurrence of both is not difficult to observe; generally speaking, the first symptom is anxiety of manner and countenance, somewhat similar to that in retention of urine. There is generally a great anxiety on the part of the patient to be relieved by operative help. Then the pulse rises, tongue is creamy and then brown, and then follow the other well-known symptoms well described by many authors, and which need not be here repeated.

How long before death the continuous action of the uterus relaxes it is uncertain. That it continues to the very verge of dissolution I have seen in a case of arm presentation to which I was called after nearly a week's labour, and three attempts to turn. The patient was scarcely able to articulate; tongue very brown; pulse 150 p.m. Even under the influence of chloroform no change from its excessive rigidity took place till a few minutes before death; so hard was it in all parts that it bore no resemblance to living contracting tissue.

Now, when hard labour-pains have existed some time and we find the rhythmical action has subsided, we have one of two conditions, the discrimination of which is very important as a guide to our proper treatment.

The first and simplest form is well known, and is that in which the uterus is simply quiescent, resting passively for a time while the nervous power is being, so to speak, collected; after a time the uterus begins to act and the labour is accomplished. Now, in this case there is no rise of the pulse; generally, on the contrary, it is weak and feeble, nor are there any untoward symptoms but languor and possibly some faintness. In these the reflex function is deficient, and its action sluggish, and, therefore, the demand on the constitution to supply nerve force is proportionately small.

How can we further distinguish this class? Place the hand on the uterus externally, and through the abdominal walls it will easily be detected that the uterine walls are lax and flabby, the fœtus readily detected within it floating about with ease.[1]

So long as this condition lasts it will very rarely be found that we have any change from the natural condition of the patient, consequently but little, if any, cause of anxiety, nor generally for manipulative interference. There may be rare exceptions, such as already indicated, in which with a lax state of the uterus, we have a failing pulse and other serious symptoms, collapse, &c.; but I think that when

[1] Wigand remarks in these cases, "The fœtus is very movable in the uterus." See Appendix, p. 233.

they do occur they are an indication of some serious lesion having taken place, rather than a state of simply nervous exhaustion or "powerless labour," so rare is it that one sees a simply quiescent state of the uterus attended by symptoms of "powerless labour."

The second form of subsidence of the pains is, as already indicated, of the opposite character. The uterus becomes gradually irritated, so that although some of the pains still occur at irregular intervals, the uterus is really in more action than before, tightly compressing the child, falling into the inequalities of its form, whereby the fœtus is prevented from escaping, every indentation of the uterus forming as it were a ledge past which it is difficult to draw the child, or to pass the hand if we desire to turn.

When this condition, more frequent than generally supposed, and not infrequent in primiparæ, has once been fairly established, it is rare that the rhythmical pains ever occur with such force as to expel the fœtus: as a rule the continuous action remains, and sooner or later symptoms set in, telling one of the necessity for interference.

How can we tell that this condition exists?

It is seldom requisite to do more than examine the state of the uterus through the abdominal parietes, occasionally it may be necessary to pass the hand within, past the presenting part. If we place the hand externally we shall find, during the intervals, what pains remain, or if they are wholly absent; the uterus hard and firm, and tightly moulded to the form of the fœtus, which, unlike that which was before noticed in the former class, cannot be swayed about, but the whole mass is more or less fixed. It occasionally happens that the fœtus is rolled up into a globular form, having lost the ovoid, and this is most common where the child is dead. In either case the want of mobility on the part of the fœtus is a distinguishing sign of this contracted state of the uterus.

Another sign will also readily help us. If it be the contracted uterus, resonance on percussion will exist up to the

margin of the hard body. If the uterus be lax, then dullness will extend beyond the hard body.

A proper consideration of these two forms of deficiency of the rhythmical uterine action enables us to decide upon the proper mode of treatment with great distinctness, and it will materially help us also to do so at an early period, earlier, indeed, than generally has been held possible.

If it is true, as already stated, that when the clamping continuous action of the uterus has once begun, there is very rarely any hope that the rhythmical expulsive pains will again preponderate to such an extent as to expel the fœtus at least unaided; and as we know that the action of the ergot of rye is to cause this very action, if it fail to cause expulsive pains, and to increase it when present, it is clear that the administration of this drug should be avoided in this state of affairs. I am not prepared to affirm that it may not, in some few cases, again rouse the expulsive pains sufficiently to expel the fœtus, but its use must under the circumstances be attended with a degree of risk such as it seems very undesirable to incur.

But if there be this objection to the use of secale and other uterine stimuli, there is on the other hand a clear and distinct indication in favour of operative interference; the mode in which it is carried out of course depending on the nature of the case, but that which is accomplished by means of traction would suggest itself as being the best, inasmuch as it would enable the fœtus to pass through the uterine grasp, and to distend the contracted portions.

An example of this class of cases is not infrequently found in a primipara, in whom notwithstanding uterine pains have continued for a long time, no progress has been made. On examination it will be found that although the head of the child have escaped the os uteri, the shoulders are caught either by the os uteri itself, or by a contraction a little way above it. When the detention has continued a certain time, the rhythmical pains gradually merge into the continuous form, and then it is very rarely that the fœtus is naturally expelled, particularly so if, secale having

been given, it has failed to extrude it. Then, unless timely assistance be given, the fœtal life is extinguished, symptoms of irritation, then of exhaustion come on, followed by putrid decomposition of the fœtus, and the patient sooner or later succumbs. Thus a comparatively small obstruction occurring, delivery by natural powers is made nearly impossible by the grasping uterine contraction. It matters not, however, in what part of the parturient passage the hindrance is situated, its position only affects the period and rapidity of the occurrence of the serious symptoms.

There is no doubt but that in some cases where the case is taken early, the continuous action yields to the influence of chloroform, but inasmuch as this remedy also, in a certain degree, diminishes the expulsive pains, it is by no means certain that its use will be succeeded by progress; on the contrary, it may be said that, with the exception of contracted states of the os uteri, the cases are rare in which expulsion of the child would occur after its use in the circumstances just narrated.

From a consideration of the above circumstances we may deduce the following as our rule both as to the time and the mode of our rendering assistance,[1] namely—

If on placing the hand on the uterus externally we find it firmly contracted around the fœtus between the pains (the observation of this point being made over a sufficient period); or if there being no pains we watch for some time and find no relaxation, we may be nearly certain that further waiting will effect no good; and therefore, in other words, it is worse than useless to postpone assistance any longer, and this rule will be still more distinct if we find the pulse rising, the countenance anxious, and much distress felt in the uterus.

If on the contrary we find the uterus lax, then we may safely wait as long as the pulse be quiet; to this, perhaps,

[1] It is by no means here intended to be implied that the forceps are not to be applied in cases where no continuous action has occurred; it is only meant that when it has occurred our line of practice is quite clear; neither is it affirmed that we are to wait always till the continuous action has begun.

an exception may be taken, where in certain cases the head may be firmly impacted in the cavity of pelvis by the pains which preceded the state of relaxation. In such case we might wait safely if we could push back the head a slight degree so as to remove the persistent pressure on the maternal soft parts, being of course ready to employ artificial aid if the recurring pains were not sufficient; otherwise, if much time elapse, it will be necessary to interfere to rouse the pains or draw the head through.

Should the pulse rise, or vary much, or other general symptoms arise when the uterus is relaxed for some time, it is more than probable that some lesion has occurred, or some unusual condition has interfered, such as an attack of an exanthem, pneumonia, &c., for the cases are rare indeed in which "powerless labour" in Dr. Churchill's sense is present without the condition of continuous contraction having preceded it, if we except that state which is induced by violent mental emotions or rupture.

It has been given as a rule by some authors that abstraction of the child should not be done unless there are pains present to assist the withdrawal of the child, secure the expulsion of placenta, and keep the uterus well contracted after. To a certain extent this is a safe rule, but it is one which is indefinite, because the "pains" may be absent, and yet the uterus very active, over-active indeed, as has already been pointed out, and even if it be not, yet it is found that when the head is drawn down the uterus does contract after.

What are the explanations for these facts?

Where there is the continuons action we may safely draw down the fœtus with proper rapidity without fear. The uterus contracts firmly on the receding contents, and even sometimes the rhythmical pains again are re-excited, and the placenta is expelled naturally, the uterus remaining well contracted afterwards. Sometimes the uterus continues so firmly contracted after the withdrawal of the fœtus, that the placenta is held as firmly in its grasp as the fœtus was, so that it has to be removed by artificial aid.

But where the uterine walls are relaxed, it doubtless is the best plan to endeavour to rouse the uterine action by oxytoxics, such as secale, &c., but it not infrequently happens that when the head is drawn down to the outlet reflex action is excited so much as sometimes to assist materially in the expulsion of the fœtus, and to secure the expulsion of the placenta and uterine contraction after. Yet the removal of the child under these circumstances is attended by some risk of hæmorrhage, especially if the child be extracted too rapidly; and if the uterus does not respond quickly to the fresh irritation. It would be best in these cases to give a trial of secale first of all, and if then no action ensue, the head may be slowly delivered, and the remainder of the body allowed to remain for a time in the passages to stir up the uterine activity, while, in the mean time, we employ the various other means known to be capable of rousing expulsive pains; and this would be the rule in those cases where there is clearly such an obstacle to the birth of the child as in any case would demand traction, but where the pains had subsided and the uterine walls were lax.

Thus we may briefly say that, in both cases of absence of the pains, we may do well (with due care) to use extraction. That *extraction* is peculiarly required in the cases where *continuous action* has supervened, while secale is detrimental; but that *secale* and uterine stimuli are of great service where the uterus is *relaxed;* while extraction (if adopted) should be employed with slowness and caution.

It is proper to state that it is not intended to be said above that a contracted state of the lower segment of the uterus as revealed to the hand passed internally, necessarily implies a generally contracted condition, because the fundus might be coincidently relaxed, and if extraction were made suddenly, hæmorrhage might occur above the constriction from the relaxed upper portion.

The following is a *résumé* of the principal points desired to be established in the foregoing paper:

1. That it is very rare to find symptoms of "Powerless Labour" (Churchill) where the uterus is relaxed.

2. That where serious symptoms have begun, and at the same time the pains have apparently ceased, it will almost invariably be found that the uterus is in a state of continuous action.

3. That the continuous action is the cause of the symptoms of "powerless labour."

4. That the time at which these symptoms arise varies considerably according to peculiarity of the patient, the violence of the action, and the position and presentation of the child.

5. That if this constant contraction be fully established it is better to deliver the child artificially, unless we first try the effect of chloroform.

6. That the effect of the continuous action is exhausting to the mother, and liable to be fatal to the child.

7. That the use of secale is contra-indicated in such cases.

8. Where the uterus is lax we can generally wait a considerable time without danger to the patient or to the child. When the uterus has been allowed time to recover its nerve force, then it is advisable to give some oxytoxic, as secale, &c. If this fail, we may then draw down the head to the vulva slowly and cautiously, which will probably induce uterine action. The removal of the child must be done cautiously, and only as we find the uterus to respond.

No case has been added in confirmation of the above remarks, because, in a large number of examples which it has happened to me to have seen, I am not aware of any exception. Doubtless there are cases which, examined in the intermediate stage, that is, at the commencement of the continuous pain, where we have the irregular contractions described by all authors, might for the moment be deemed as exceptions; but if sufficient time be taken to observe the uterine state, it will generally be in our power to say whether it exists or not over the whole organ. It may be asked, For what period are we to extend our observations before we can be sure of the real uterine condition? Perhaps a quarter of an hour will be enough for all cases, but

less will often suffice. The hand need not be all the time over the uterus, but should be during the intervals of two or three pains. This should be repeated two or three times during the quarter of the hour. If we upon each occasion find the uterus contracted firmly, we may conclude that continuous action has supervened.

No attempt has here been made to explain the difference between the rhythmical action and the continuous. Numerous explanations might be ventured upon, but in our present knowledge we are unable to determine how far it is owing to anatomical arrangements, or to an alteration of the peristaltic wave.

One other subject remains for consideration. It appears to me that the most satisfactory basis for classifying dystocia is that founded not on the duration of labour, nor upon the fact as to whether instruments are used or not, but upon the more simple one of *Cause*. For instance, taking A. The uterus as a (1) motive power; then (2) as part of the parturient passages; B. The vagina; and C. The pelvic bones. The troubles which arise from abnormal conditions of the ovum would necessarily follow next. After which the complications of labour, as convulsions, &c., would be given.

In the introduction to dystocia it would be pointed out that from whatever cause in whatever part a detention arose, certain symptoms sooner or later appeared which, continuing unrelieved by art or nature, ended fatally. The variation of their occurrence in time, in intensity, and in rapidity, according to the position of the fœtus, and its presentation, would be specially indicated. It would, therefore, only be necessary when speaking of each cause to allude slightly to these points, proceeding quickly to the appropriate treatment. This basis is of great value, clinically, for the mind, on finding a detention of labour, will at once seek for the cause; this having been found, the knowledge of the effects of the persistence will lead it to seek also the remedy, whether by natural powers or by art. Whereas the practitioner must wait till labour is over, if he endeavours to

distinguish whether it be a lingering, laborious, or powerless labour; or complicated with the use of instruments. It may be asked, Does this really signify? I believe it does much. A clear and immediate perception of the cause leads one instinctively to the means required for the solution of the difficulty; whereas, where we must wait till the end of labour to classify it, the mind is naturally apt to wait for a longer period before it seeks the appropriate treatment, and then it must of necessity fail to find the rules of management, because before it can do so, the case must be over. It is true that the elder practitioners would intuitively classify by the cause, and remedy it accordingly, but the younger practitioners must be more or less confused by it; and even the elder one is doubtless in some degree influenced, at any rate he is not assisted by it, as he would be by the other plan.

Quotations from various authors bearing on the subject of this paper are to be found in the following pages.

The President remarked that the author of the valuable paper just read, while alluding amongst others to his (Dr. Davis's) classification of difficult labours and their division into "powerless" and "obstructed," seemed to think that he limited the term "powerless" chiefly to the first stage of the function; whereas his work showed that he applied the term equally to the first and second stages of labour, as experience teaches us we must so apply it. He did not employ the term powerless in "obstructed" labours, because absence of parturient action in them was not an essential element: it might or might not be present, and when so, either as a conservative element in the face of an obstacle, a safeguard against injury to the mother and her offspring, or, as in other cases, the effect of exhaustion from long protracted but fruitless efforts and their attendant suffering.

After some remarks from Dr. Barnes and Dr. Graily Hewitt, expressive of their high opinion of the practical value of Dr. Hicks's paper,

Dr. Martyn desired to know whether Dr. Hicks met with that hard, tender, state of the uterus, with constant uterine action, which he said indicated obstruction to the passage of the child, at an early stage of the obstruction as well as in later stages.

Dr. Cleveland so fully concurred in the propriety of artificial

delivery, when the natural efforts seemed decidedly unequal to the task, that he was reluctant to make a remark that might appear opposed to that course; but he had seen cases of exhaustion where the rhythmical pains had merged into continued inffectual sub-contraction, and where a full dose of opium, by procuring sleep, had been followed by restoration of power, and not unfrequently the uterus had awakened to its ordinary and successful function of expelling the fœtus.

Dr. Rogers agreed with Dr. Cleveland that in some cases a full dose of opium was of essential service, as it induced sleep, to be followed by renewed uterine efforts and speedy delivery. But this could only be useful when there was no serious impediment to the labour, or want of harmony between the fœtal head and the pelvis. In such labours Dr. Rogers believed in the necessity of early interference, and when the natural pains gave way to a state of continuous contraction, he agreed with Dr. Hicks that it was time, without further delay, to bring the labour to a conclusion.

Dr. Hicks, in answer to the various speakers, said that the paper was not intended to be exhaustive. What he wished to show was the value set by various authors on the term "powerless labour," and he had very great difficulty in bringing the matter into a presentable form. He also was anxious to call attention to the constant occurrence of the continuous action which was the cause of the exhaustion in cases of so-called "powerless labour." In answer to the question of Dr. Cleveland regarding the employment of opium, he thought that, although in the early stages of this action opium in small doses might do some good, and by chance might cause relaxation, yet he had no hesitation in saying that, when the action was once confirmed, opium did more harm than good; it destroyed what little remained of the rhythmical pains, and then the child was helplessly held in the uterus—it died, decomposed, and destroyed the patient by the poison so engendered. He had seen many instances of this. Extraction, under these circumstances, was the proper plan. In answer to the President, he said he had not intended to imply that he did not recognise the "powerless labour" as occurring in the later stages. On the contrary, what he had said in the paper was that the special chapter on "powerless labour" referred to the first stage—contrary to some others. He did not dispute the term; he merely wished to show the variation on the subject.

APPENDIX TO PRECEDING PAPER.

Dr. Hall Davis, 'Parturition and its Difficulties,' 1865.

Introduction and Chapter I.—*Powerless labour: defective power in the agents of labour.*—He points out the various causes which may make the uterus less powerful, or cause irregular action, as mental impressions, constitutional debility, irritation of bowels, over-distension, &c.

Hence he makes in this classification powerless labour to mean feeble and irregular pains, not the powerless labour of Churchill.

In his chapter 3, treating of obstructed labour, he says, speaking of the time for interference: "In my own practice I adopt it as a rule, modified by the circumstances of each case, a limit of from four to six hours of arrest of the head in the second stage of labour, under strong pains, in one position, from which it neither advances nor retires. But the symptoms in each particular patient must be borne in mind, for should serious prostration or ill effects of pressure on the parts appear sooner, it would be necessary for the patient's safety to deliver even within those periods of time."

After quoting Osborne's and Burn's opinion, he says:

"The symptoms which should urgently call for interference and excite our anxiety are a feverish pulse and skin, loaded tongue, or dry, heated vaginal mucous membrane, a brown, often offensive, discharge from the uterus, tenderness and swelling of the genital surfaces, and soreness of the abdomen. Sometimes there are others of a still more serious kind: a haggard countenance, dark vomiting, cold clammy skin, a small, irregular, intermittent pulse, laboured respiration, a brown tongue, rigors, and delirium," &c.

Dr. Hodge, 'Midwifery,' first edition, page 507.—*Labour complicated with exhaustion.*—In very many instances the delivery of the child cannot be accomplished in consequence of the want of power in the uterus or in the general system. The uterine pains become more and more inefficient, until

they are completely suspended, so that the child and mother perish without artificial assistance. This constitutes labour with syncope or exhaustion, 'the powerless labour' of the British accoucheur. It is to be distinguished from inertia or deficient excitement by the fact that although there is a want of action in both cases, yet where there is a loss of power stimuli have either no influence over the uterine functions or such influences are transient and ineffectual."

Further on he says: "The uterine powers are seldom originally deficient, but they are exhausted by protracted or violent efforts to accomplish delivery. Such exhaustion, therefore, is generally the result of protracted labours arising from mal-presentations or deformities of the infant, rigidity of the tissues, deformed pelvis, the presence of tumours, preternatural constrictions of the os uteri, vagina, or any other cause of difficulty or impracticable labour. In such cases the powers of the uterus become gradually more and more weak until all action is suspended. Powerless labour, therefore, is very seldom primitive: it is always secondary, and rather a symptom of difficult or impracticable labour."

"The symptoms of labour with exhaustion are very evident. The gradual failure of uterine action, which cannot be re-excited, the sensations of weakness and exhaustion of which the patient complains, the oppression of the breathing, &c." (Here follow the symptoms described by other authors.)

Osborne, 'Essays on Practice of Midwifery,' 1792, pp. 57-59.—After pointing out the advantage of not too early an interference with labour, he says that in some cases a time comes when the necessity for assistance is imperative. He remarks upon the difficulty of laying down definite rules to guide the practitioner to know when that time has arrived, but as a help he remarks that the consideration of three of the most material circumstances will much assist—"1st, the duration of labour; 2nd, the unaltered position of the child's head; 3rd, the continued cessation of labour pains from exhaustion of bodily strength." After discussing the first two he proceeds (p. 59): "3rdly. The continued cessation of labour

pains for several hours with the head in the situation just described, accompanied, too, with other signs of general debility which, depending on the same cause, are evident from an alteration of countenance and a weak and quick pulse, and which demonstrate that the living powers of the whole body, or *vis vitæ*, are greatly reduced, if not irrecoverably exhausted. This state of the patient is very different from that occasional and temporary suspension of the active powers of life or uterine contraction which often takes place in the early stage of labour, and which is evidently intended by nature to act in the same way as sleep does every day in the ordinary course of life; and which suspension is, indeed, generally accompanied by a short sleep, and followed upon waking with a renewal of the labour pains; but here all the powers of life are exhausted, all capacity for further exertion is at an end, and the mind as much depressed as the body; they would at length both sink together under the influence of such continued but unavailing struggles unless rescued from it by means of art."

Dewees, 1824, p. 276.—"The capacity to bear fatigue or to support the toil of labour will differ in each individual who may be subject to it either from the original stamina or the severity of this process itself. Hence the most robust woman as well as the most delicate may become exhausted from the force or the long continuance of labour. The exhaustion here intended to be understood is not mere loss of strength in the muscular system, but a state of inertia of the uterus itself." He points out that these two conditions may exist separately or combined.

"Should there be a mere loss of muscular strength and the uterus preserve its powers, it will offer no indication itself as regards delivery, but should the powers of the uterus be on the wane or entirely suspended, though the woman may preserve great muscular vigour, it should warn us not to confide too long in this appearance of general strength, lest the uterus itself may be the subject of casualties independently of its temporary loss of vigour."

He then points out that this state may arise from various causes; for instance, over-distension of uterus and engorgement. He then says: "There is another variety of this exhausted, or rather passive, state of the uterus" where the labour has set in briskly and then subsides. He then proceeds:

"§ 675. This exhaustion may be positive, and may be occasioned by severe and long-continued exertion. In this case the uterus ceases to contract or contracts so feebly as not to advance the labour. When this is so the general strength of the patient fails with it; she becomes listless and indisposed to exertion of any kind; she almost always sleeps between the slight pains if they exist, or if they do not she continues in an uneasy and disturbed slumber until she may be aroused by the anxieties of her friends, &c. The skin is almost always damp, or even sweating, pulse frequent and small: countenance pale and haggard; the stomach oftentimes disturbed."

§ 676. He points out that it is often owing to a rigid os uteri, the uterine power being expended in overcoming resistance. He says it is in vain to give stimulants or waste important time in endeavouring to restore uterine action (excepting, however, the trial of ergot), but to use forceps.

§ 677.[1] "We have been obliged, under the head of 'Exhaustion,' to give examples that were not in strict conformity with the subject in question, namely, where 'a natural labour was complicated and required manual assistance;' but they are important, and could not be classed under any better head." "Hitherto every species of inertia has been treated in the same manner," &c. &c.

P. 310. He advises we should draw down coincidently with the pains: "When the uterus has ceased to act we should permit as much time to elapse between each exertion as generally takes place between the pains at this period of labour, that we may not exhaust the uterus," &c. &c.

Dr. Robt. Lee, 'Lectures on Midwifery,' Protracted and

[1] An instance of the cramping effects of rigid classification.—J. B. H.

difficult labours, gives seven classes. The first heading is "Feeble, irregular, or partial uterine action" from various causes enumerated; mental depression, &c. In it there is no allusion to the permanent action.

In it he discusses the value of ergot, and points out its power of producing pains so frequent as to run into one another, and thus, pressing on the circulation of the uterus, it causes death of the fœtus.

Dr. D. Davis, 'Operative Midwifery,' p. 48, thinks the term much misapplied. He says: "I do not remember having ever witnessed a state which I should consider myself correct in designating by the epithet exhaustion presenting itself *within twenty-four hours* from the commencement of true labour pains. I do not mean to assert that the accession of other evils, which might complicate and endanger the issues of the process, and which might require the interposition of artificial assistance, might not occnr long before that period; but I am now speaking of exhaustion from failure of the powers consequent upon previous and excessive exertion. Again, I can have no idea of a state of exhaustion of the power of parturition in the case of a previously healthy subject, excepting in connection with a considerable prostration of the general constitutional strength, whereas I am not very sure that such a condition can be presumed to exist without its being accompanied by a dangerous contusion of the organs more immediately concerned in the labour."

Otherwise there appears no allusion to the exhaustive state, nor to the continuous action of the uterus.

Wigand, in his 'Geburt des Menschen,'[1] under the title of "Wehenschwäche, Asthenie der Wehen, Trägheit, Adynamie, Atonie der Gebärmutter," says, "The work is, however, performed rightly, but unusually tardy and prolonged."

Again, "We know the feeble pains (wehenschwäche) by the following signs: the contraction of the womb either ceases, or makes an unusually long pause, or breaks off in its

[1] Berlin, 1820, ed. by Naegele, Erster Band, p. 82, &c.

otherwise normal course too quickly, or are at one time stronger, at another feebler. The parturient passages open themselves as slowly as the child pushes forwards."

Also further on he says, "The child is very moveable in the uterus, and also it has no direct firm position in the upper opening of the pelvis."

He then specifies the forms, dividing them into three grades.

"1. In the first grade the womb contracts not only altogether regularly, but also in such manner that the child with each pain pushes forwards, and the labour has generally its otherwise normal progress, but its progress is improperly tedious, and interrupted by too long a pause between the pains, &c., &c."

"2. In the second kind the uterus contracts, indeed, still with situation and direction correctly, but the contraction is not powerful, continued and effective enough. The mouth of the womb will therefore be not overcome, the contractions remain not, as is proper, in the fundus longer than in the lower segment, the pain ceases much more suddenly, so that the cycle of the contraction is brought back again to the os uteri."

"3. In the third and highest grade every pain has ceased in the uterus, so that, except a constant small universal tension, which appears in solitary special cases, neither in the mouth of the womb nor in the fundus a state of contraction is to be observed. This condition, which I sometimes call *ermüdung* (lassitudo uteri), sometimes *erschöpfung* (exhaustio), and sometimes *lähmung* (paralysis), have I made, &c. &c."

Blundell, Severn's edition, p. 303.—After remarking upon the liability to sloughs from pressure of protracted labour, he says, "It is much to be wished that some experienced practitioner could discover for us a rule by which we might determine with precision the moment when contusion, likely to terminate in these formidable sloughs, is commencing. I may observe in general, that when the pulse is not

permanently rising, nor the strength failing, nor the labour protracted beyond twenty-four hours of strong exertion after the discharge of the waters, if the head be above the brim, nor more than three or four hours if loosely locked in the pelvis, nor more than half an hour or an hour if more firmly locked, then the patient is secure against slough, but if the converse of these conditions occurs, sloughs are to be apprehended. Let me add too, more simply, that a pulse of 100, and vigorous powers, are a plain and valuable indication of security, and that you have good cause for alarm and vigilance when the pulse begins to fail, and the countenance acquires an expression of anxiety, and there is that which leads the practitioner to remark that 'the patient looks very much worn.'"

He says irritability, feverishness, may occur during easy delivery, but more after violent efforts, which symptoms may vanish on delivery, or may continue after delivery, passing into mania, but there is no reference to the continuous action of the uterus. He attributes most of the severe symptoms to contusions and sloughs.

Churchill, edition 1866, p. 277.—*Powerless labour.*—After remarking on the period after the beginning of the second stage at which the state may commence, he says, "The pains which had been regular and powerful are observed after this period to become irregular, both as to recurrence and force; for a while they may be more rapid, and then return less frequently, and evidently with far less effect. They may continue to grow weaker, until the characteristic bearing down effort ceases altogether, and with equal suffering we have the loud outcry and slight force of the first stage, just as though the labour had retrograded. In some cases the character only of the pains is changed, and not their frequency; in others they return at lengthened intervals. Other symptoms accompany or shortly follow this breakdown of the uterine action. The shivering which was mentioned as symptoms of natural labour often becomes extremely severe, so as to resemble a convulsion;" and he then narrates

the symptoms—vomiting, restlessness, jactitation, rapid pulse, dry tongue, mind disturbed, vagina hot and dry; ultimately this state running into collapse and death.

At next page he continues, "I do not propose to explain why this series of alarming or fatal symptoms should result from delay in the second, rather than in the first stage of labour; it may be that the first is more local, the second a more constitutional process; that in the latter the different systems of the body (vascular, nervous, muscular, &c.) are more deeply involved, and that a return to their natural state, without the removal of that which occasioned their implication, is impossible, &c., &c. Whatever form of expression we may use, the fact remains the same."

Ramsbotham (Sen.), 'Observations on Midwifery,' part I, p. 271, § 8.—"An increased degree of painful sensation in the uterus, and in the abdominal parietes, which is produced by repeated contractions and by resistance, adds considerably to the sufferings of the patient, and is only met with under a state of long protraction. It is readily detected by moderate pressure by the hand." He then goes on to say that in a short quick labour no pain is felt in the interval; but that after frequent and violent pains, the uterus wall having been brought into close contact with the child, the uterus becomes tender and sensible to the external touch.

In the next section he says, "The obvious impression made upon the system by the continuance of the active exertions of labour is, in every instance, a deserving object of close observation. When, in consequence of the repetition of vain expulsive efforts, a pungent sense of heat is perceptible on the skin; when the tongue becomes white and dry, or brown and foul; when the lips are parched; when there is a constant pain in the head, which is rather on the increase; when there is a dark-coloured flush on the face, with a rapid small pulse, such symptoms indicate the advance of febrile irritation, the progress of which will only be checked by timely delivery. If to the preceding symptoms be added a dejection of countenance, expressive also of great anxiety; a

languid eye; a hurried and difficult respiration; a low delirium; occasionally rigors, with vomiting of a coffee-grounds like fluid, the urgency of immediate delivery becomes more obvious."

Burns, edition 1811, p. 320.—"The second general cause of tedious labour is, irregular action of the uterine fibres. When the child is born, the uterus sometimes contracts like a sandglass, and retains the placenta. The same spasmodic action may occur before the child is expelled. It is marked by pain coming on at intervals, like proper pains, but is confined to the belly, and has little effect on the os uteri, or in forcing down the child. The contraction does not go off with the pain, it only lessens; hence the band of fibres still compresses the child or ovum. If this affection be slight, it may soon go off, but if the spasm be strong, it sometimes continues for many hours."

Velpeau, 'Traité Complet de l'art des Accouchmens,' 1835, Bruxelles, p. 297, alludes to irregular pains and irregular contractions, and says the latter may be felt through the abdominal walls. After this he says, "Ces contractions spasmodiques, dècrites avec quelque soin par Denman,[1] forment le tetanos utérin de Wigand,[2] quand elles sont fixes ou qu'elles comprêment tout l'organe à la fois."

Cazeaux, p. 451, § 3.—Irregularitè des douleurs.—"Ces contractions irregulieres, qu'on a designée sous le nom de *tetanos uterin,* cessent quelque fois d'elles-memes, mais souvent aussi se prolongent indefiniment. Il est important alors de les faire cesser."

Baudeloque (Heath, edition 1790), vol. ii, p. 81.—"1079. The accidents which do not permit us to abandon the labour to nature, either because it would endanger the life of the mother, or of the child, and often both; or because it

[1] Denman, 'Eschole des sage femes,' &c., p. 202.

[2] Wigand, 'Introd. pratique,' &c., vol. ii, p. 35 and 97.

absolutely cannot be performed without help, are an hæmorrhage, convulsions, frequent faintings, or syncopes, are exhaustion of the woman's strength, a lingering or cessation of the pains, the existence of an irreducible hernia, &c. &c."

Page 109.—"1113. Syncopes or faintings, if frequently repeated in the course of labour, although we may not be able precisely to determine the course of them, as well as a general weakening or exhaustion, which deprives the woman of the power of exerting sufficient efforts to expel the child, ought to engage us to deliver her, in order to prevent consequences very often disagreeable.

"1114. That procedure is a thousand times preferable to the useless attempts which are made to quicken lingering pains, after a labour so long and severe, that the uterus scarcely retains the power of contracting, or is in a state more or less disposed to inflammation."

Although he speaks of the effects of lingering labour, he made no mention of the uterine condition further than cessation of pains.

Murphy, p. 137, first edition.—Speaking of cases of slow progress of the fœtal head he says, "But if no effect be produced, its (the uterus) action is suspended in the same manner as in the first stage, only for a shorter time. When the pains are renewed, they are not so strong as before; the uterus seems, as it were, conscious of the difficulty, the pains are shorter, although very often severe.

"After this comparatively feeble action of the uterus has continued for some time, the pains return in their former strength, especially if the patient has had even momentary sleep. If the difficulty be insuperable, they may either again cease, or continuing, may produce inflammation of the passages. When this is in the least degree indicated, the pains are very short, extremely severe, and in their intervals the patient still complains of pain, and a feeling of soreness. If the uterus be examined through the abdomen you will observe a very perceptible difference in the sensation it communicates. It feels almost as hard and contracted in the

interval as during the pain; the patient cannot bear to have the abdomen touched. Besides this alteration in the character of the pains, we have other symptoms, both local and general, to guide us."

He then proceeds to describe the symptoms as generally given in powerless exhausted labour.

Dr. Rigby, 'Library of Practice of Medicine,' p. 209.—After pointing out the causes of inactivities of uterus, he says, "The mere cessation of uterine action, however, where the labour has been tedious and fatiguing, is no proof the uterus is exhausted and incapable of further efforts, so far from sinking into a state of quiescence being a symptom of exhaustion, experience shows that, in labours of this character, it indicates a very opposite condition, being nothing more than a temporary repose, &c., &c." He then shows that an improvement takes place in the general state of the patient.

"On the other hand, where the pains, in spite of their becoming more and more ineffective, continue to exhaust the patient with fruitless suffering, and prevent her enjoying that repose which is so desirable under such circumstances; where the uterus, from increasing irritability, scarcely ceases to contract even for a moment, but continues tense, and more or less tender during the intervals of the pains, we can have little or no reasonable expectation that such a labour can be terminated by the natural powers." He then says if the head be not much advanced, we may try soothing remedies to induce a rest; if the head is low down, and only wants a little more help, we can best employ the forceps.

DECEMBER 4TH, 1867.

Dr. HALL DAVIS, President, in the Chair.

Present—57 Fellows and 10 Visitors.

The following gentlemen were elected Fellows: Dr. Rayner Batten, Gloucester; Dr. Junker, Mr. Levy, and Mr. Robinson, London.

Dr. Wynn Williams and Mr. T. Chambers were requested to act as auditors of the financial statement for the current year.

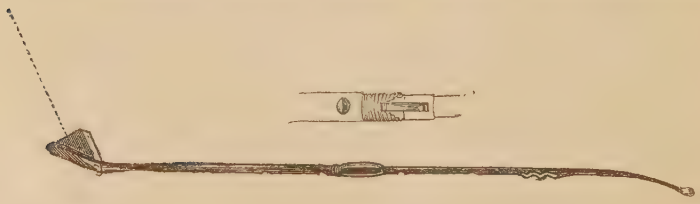
Dr. GREENHALGH exhibited the uterus of a patient upon whom he performed the Cæsarean Section eighteen months ago, on account of epithelioma of the cervix. For more than six months after the operation the disease, which was advancing rapidly, underwent considerable improvement, the hæmorrhage and pain ceasing, and the local affection dwindling to an almost inappreciable degree. The disease then again began steadily to advance, and ultimately destroyed her. It was interesting to observe that the body and fundus of the uterus with appendages were healthy, the neck being occupied by a large disintegrating epitheliomatous growth. The incision in the uterus, originally about six inches in length, now reduced to one inch, was perfectly healed; the serous covering, however, appeared not to have been reproduced.

Dr. BARNES exhibited the uterus of a patient who had

died from puerperal fever. The patient was twenty-three years of age. She was delivered after natural labour, child living, on the 16th of November. She was seized with severe pain in the abdomen, shivering, and fever on the 18th; and on the 23rd she died. There was nothing to favour the conjecture that she had contracted any disease of an epidemic character. The case appeared to be one of simple autogenetic origin. On examination, the pelvis, peritoneum, and the peritoneal surfaces of the intestines in relation with the pelvic organs, were covered with soft fibrin, breaking down into pus. The cavity of the uterus was empty; the placental seat, near the fundus, still prominent; the walls were thick and fairly contracted. There was no appearance of pus or putrilage in the uterine sinuses. The sinuses even in the neighbourhood of the placental seat were clean and healthy. The veins on either side of the neck of the uterus, in the broad ligaments, also seemed healthy. In one of these there was a feebly-contracted fresh clot.

Dr. Barnes also showed a Placenta displaying Fibrinous Deposits, forwarded by Mr. John Marshall, of Dover. The placenta was taken from a patient in good health; and the child, born at the full term of gestation, was alive and well. Dr. Barnes observed that these deposits generally take place towards the end of gestation; and the effused fibrin is commonly found in greatest quantity around the margin of the placenta on the fœtal surface, in the neighbourhood of the circular vein. It does not appear to involve change in the proper structure of the placenta, and the child is generally born alive. It occurs in persons quite free from syphilitic taint.

Dr. Meadows exhibited a new Uterine Sound, to which



was attached a Metroscope. The chief peculiarity of the sound consisted in having the measuring points on the concavity instead of the convexity of the instrument. The metroscope was formed by means of a glass prism, fixed at an angle to the handle of the sound, and was so placed that, when used through the speculum, objects could be seen almost at a right angle to the axis of the speculum, and at a considerable distance from the refracting surface of the prism.

Dr. Eastlake exhibited a Child in whom the Posterior Fontanelle was large and quadrangular.

CASE OF ENCEPHALOCELE.

Exhibited by Heywood Smith, M.A., M.B. Oxon.,

PHYSICIAN ACCOUCHEUR AND PHYSICIAN FOR DISEASES OF WOMEN AND CHILDREN TO THE ST. GEORGE, HANOVER SQUARE, DISPENSARY.

C. B—, æt. 28, was married on the 16th of May, 1867. The last catamenial period before her marriage happened about the middle of April, and lasted, as usual with her, about a week. On the 18th of May (two days after she was married) the catamenial flow appeared for one day only. About the end of June her sister died of dropsy. Previously to her death she was tapped; and the water that was drawn off was shown to Mrs. B., who heard a great deal of talk about her sister's disease. She "felt bad" all that week, and at times was faint. Latterly she "felt the child heavy at the bottom of her stomach." She suffered from varicose veins. Two months ago she came to the dispensary with an eruption which covered her abdomen and arms, producing great irritation, and having the appearance partly of scabies, and partly of urticaria, which yielded to treatment in about a month.

She was taken in labour at 11 p.m. on November 28th.

I first examined at 8.45 p.m., November 29th, when I found the head presenting in the first position, with what appeared to be the edge of a considerable opening, about the position of the posterior fontanelle, and a tumefaction posteriorly, and to the right. At 11.10 p.m. the tumour presented at the outlet, and was quickly expelled, the rest of the head following naturally. The child was a male, and at first did not appear very lively, but after a few minutes respiration was established. The placenta came away in ten minutes, and presented this peculiarity, that the funis was inserted at the edge, and was fused with the membranes for about six inches. Taking into consideration the decidedly lessened quantity of the catamenia in May, and its occurrence only two days after marriage, and reckoning the pregnancy from May 17th, it would make the period of utero-gestation only twenty-eight weeks, yet the appearance of the child was that of one born at full term.

The head of the child was rather small; the frontal bone sloped backward, reducing the facial angle; the parietal bones were in apposition, their edges forming a slightly prominent ridge; there was scarcely any anterior fontanelle, and the posterior fontanelle did not measure more than a square line. From a quarter to a third of an inch of the anterior and lateral portions of the occipital bone could be felt, the remainder being covered by and occupied with the root of the tumour, which projected to the extent of about one third of the whole head.

The measurements were as follows:

From the root of the nose to the anterior margin of the tumour $5\frac{3}{4}$ inches.

Around the tumour vertically $7\frac{3}{4}$ inches.

Around the tumour horizontally $7\frac{3}{4}$ inches.

Its girth at the root $6\frac{1}{4}$ inches.

Its depth $3\frac{1}{4}$ inches.

Its width $2\frac{3}{4}$ inches.

The anterior two thirds of the tumour were covered with hair, while the posterior third was covered with a thin integument, which was slightly darker and more red than the rest of the skin covering the tumour. This posterior part was somewhat tense and glazed, and towards its superior aspect there was a spot about the size of half a pea, where the skin seemed denuded of epidermis and about to burst. The tumour when carefully compressed did not seem at all diminished in bulk. At the junction of the lower with the two upper thirds there was a slight constriction in the tumour as of a tense band from the inner aspect of the scalp. There was a small somewhat hard mass to be felt towards the right of the reddish portion behind. The tumour was not at all translucent.

The child was very quiet, seldom crying or making much voluntary movement. In certain positions, the hands were affected with a rapid tremulous or waving motion.

The right angle of the mouth is somewhat drawn downwards, and the lower lip slightly everted, the whole jaw being a little drawn to the right side when the mouth is opened. Compression of the tumour does not seem to pro-

duce any result save a slight apparent drowsiness. When the child cries, the tumour gets more tense.

The next day the skin covering the posterior aspect of the tumour was rather darker, and it has gone on getting gradually more mottled in appearance, and evidently thinner.

December 1st.—The tumour measured vertically $8\frac{1}{3}$ inches.

TRAUMATIC ANEURISM OF THE UTERINE ARTERY: FATAL HÆMORRHAGE.

By Graily Hewitt, M.D., F.R.C.P.,

PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN, UNIVERSITY COLLEGE, AND OBSTETRIC PHYSICIAN TO THE HOSPITAL.

The subject of this case was a patient in the Maternity attached to University College Hospital, an Irishwoman, æt. 37, living in a small confined apartment. She had had seven children previously and one miscarriage. She was delivered by means of the forceps on September 10th, 1867, after a labour of twenty-seven hours' duration. The head was in the fourth position, which accounted for the delay. The head was quite low down when the forceps were used. The placenta came away directly, and there was no undue loss of blood. The woman was in a half-starved state, and good nourishment was at once given. Four days after her labour she was doing well, and there was no symptom calling for interference.

On or about the fourth day after her labour her husband came home drunk, and it is stated that he got on the bed and knelt on the abdomen of the patient. The patient herself would not, when questioned on the subject, admit that she had been injured in this way; but the further account will show that the account given as to her having been thus injured was substantially true.

Mr. Russell, the gentleman in attendance, found her

shortly after this very ill and in great pain across the abdomen.

On September 22nd Mr. Maddox, the obstetric assistant, found her in the following state. The abdomen distended and tympanitic, a dark bruise extending across the abdomen at the lower part, from one iliac region to the other, also down the right thigh for two or three inches. Great pain on pressure over the pelvic brim on the right side, where there was a hard, firm, swelling extending upwards a short distance.

23rd.—There occurred a slight flooding. She continued very low and weak for a day or two, but on September 28th reported doing well. Taking food readily.

30th.—Twenty days after labour there occurred suddenly a violent hæmorrhage from the vagina. Mr. Maddox, who was called to her, found her cold, almost pulseless, the bed filled with clots. Cold had been applied, and the bleeding had ceased. Restoratives were administered, the clots in the vagina were not disturbed, and no further loss then occurred.

October 2nd.—State as follows, from notes made at the time by Dr. Graily Hewitt.—The remains of the bruise still visible, abdomen very tender, hardness and resistance extending upwards from the right groin. Great pallor of the surface, pulse very weak. No loss of blood since September 30th.

6th.—Patient removed to the hospital, the apartment she was in being close and confined.

11th.—Large quantities of yellowish matter observed to come away each time the urine is passed. Patient better.

14th.—Another violent flooding came on suddenly after the patient had, contrary to instructions, sat up in bed.

17th.—A further violent flooding occurred at 9 p.m. This was temporarily checked by pressure, but the patient never rallied from its effects, and died at 11 p.m., thirty-seven days after labour.

The post-mortem examination, kindly made by Mr. Bruce, October 18th, gave the following results:

The body was completely blanched, the intestines were

slightly adherent to the abdominal wall in front. On the right side they were matted together by inflammatory exudation, especially near the cæcum. Extending upwards from the right side of the uterus as far as the lower border of the right kidney was an abscess containing a large quantity of yellow pus. The abscess communicated with the interior of the uterus by means of an aperture admitting a large-sized quill.

The bladder presented nothing unusual beyond slight ecchymosis of the mucous membrane from contact with the catheter.

The uterus was large. The thickness of the walls at the fundus a little over an inch. It contained a largish clot. At the lower part of the body of the uterus on its right side was a depression or pouch, through the bottom of which a probe could be freely passed into the cavity of the abscess before described, and from the side of which opening there projected into the cavity of the uterus a mass half an inch in diameter. On further examination, this mass was found to consist of a sac with a coagulum of blood within it. It was perforated at one part of the surface. Further dissection showed that the sac was an aneurismal pouch communicating directly with the uterine artery on the right side. (*See accompanying illustration.*) Microscopic examination by Mr. Bruce proved an absence of arterial tissue in the walls of the sac, only fibrine and exudation matter being present. The perforation on the surface of the sac was doubtless the point at which the fatal hæmorrhage occurred. The tissues of the uterus, round the opening by which the abscess communicated with the uterine cavity, were soft and friable.

It is evident, from a consideration of the foregoing facts, that the uterus was seriously injured by application of violence from without. While still large it had been squeezed forcibly against the hard bones of the pelvic brim, and its tissues bruised and lacerated, at the right side especially. One of the large vessels of the uterus must have been injured and probably torn. This vessel has subsequently undergone an aneurismal dilatation, and the hæmorrhage, which recurred on four occasions and finally destroyed the patient, was due

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to rupture of the aneurismal sac which lay freely exposed in the interior of the uterus.

The abscess was also a result of the injury received, the opening into the cavity of the uterus was small.

The case appears to be unique. Effusions of blood into the tissues of the uterus in connection with parturition do occasionally, but rarely occur, and Dr. McClintock, in his work 'On Diseases of Women,' has an interesting chapter on uterine hæmatocele; but there is no instance resembling the one now related.

The diagnosis during life was that the uterus had been bruised, that the hæmorrhage was due to effusion of blood near the uterus and opening into it, but no idea could be formed as to its precise seat. The case was further complicated by presence of pelvic cellulitis resulting in the formation of the large abscess above described.

The formation of an aneurismal pouch, in immediate connection with a large uterine artery, is an occurrence of great pathological interest, while the case is, in its practical aspects, a very important one.

Dr. Aveling considered that it would have been advisable to dilate the cervix with a sponge tent, and then explore the uterine cavity with a view both to diagnosis and treatment.

Dr. Routh, understanding from Dr. Hewitt that he had detected the abscess during life, and judging with the advantage of the post-mortem examination before him, could not but think that perhaps something more might have been done before death. A sponge tent applied would have given a freer exit to the pus subsequently, and at any rate checked the hæmorrhage. Moreover, it would have revealed the existence of this pulsatory tumour, which might have justified the injection of tincture of the sesquichloride of iron into the uterine cavity, or a drop or two of the perchloride might have been injected into the tumour itself, or the continuous galvanic current applied, and so the tumour destroyed. After the second hæmorrhage some interference was justifiable, and the third might not have been fatal. He did not, however, in any way call in question Dr. Hewitt's skill, as the case was very obscure during life.

Dr. Graily Hewitt stated, in reply, that he had not seen the patient during the first part of her illness. Her condition was such that he did not consider dilatation of the os with the view

of exploring the interior of the uterus would have been a proper procedure. Looking to the fact that the probability was during life in favour of the existence of rupture of some vessel of the uterus, extreme rest and quiet appeared to afford the patient the best chance of recovery. The condition actually present was of course not suspected, there being no instance of the kind on record.

REPORT OF A CASE OF CÆSAREAN SECTION, WITH REMARKS.

By D. Lloyd Roberts, M.D., M.R.C.S.L.,
SURGEON TO ST. MARY'S HOSPITAL, MANCHESTER.

On the evening of June 2nd, 1867, Ann K—, æt. 21, a farm servant, in labour, living at Northern Etchels, Cheshire, was sent to St. Mary's Hospital, Manchester, in a spring-cart, a distance of six to seven miles, by Mr. Pitman, surgeon, of Cheadle.

The following particulars respecting the patient were obtained with some difficulty from her aunt. The mother of Ann K— bore twelve living children, at the full period of pregnancy. These labours were natural, and the children of average size. She had moreover one or two miscarriages. At the age of forty-one years she died, but of what disease informant could not state. The father of the patient, a healthy man, died in his seventy-third year. A few years before his death he became imbecile.

Ann K— herself, I was told, always enjoyed good health. Being of weak intellect it was found difficult to obtain precise information as to the date of her pregnancy. On her arrival at the hospital, I found she had been in labour since the day before; the liquor amnii was discharged, but I could not learn at what period the membranes had ruptured. I found the uterus contracted on the body of the child, and

very moveable, swaying from side to side, according as the patient changed her position. I thought the pelvis was elongated in its antero-posterior diameter. I ascertained, stethoscopically, that the child was alive, the pulsation of its heart being distinctly audible. On examining per vaginam, I found the outlet of the pelvis very much contracted, the rami of ischia and pubis being so nearly approximated, as to reduce the arch of the pubis to a mere slit, just wide enough to admit the index finger. On passing the finger upwards, behind the symphysis pubis, I felt a round solid tumour. She passed through the night tolerably well, and experienced no labour pains, in consequence doubtless of uterine exhaustion.

This morning (Saturday) I found her not very much altered in her general condition. She had urinated, her pulse was 90, her skin rather hotter than natural, her tongue was furred, and she was thirsty. The abdomen was rather more tender, but other symptoms relative to her labour remained the same. A consultation of the medical officers of the hospital was held at 10.30 a.m., present—Drs. Radford, Ogden, Nesfield, Mr. Heslop, and myself. A full and careful examination was made by every one present, and it was unanimously agreed that the pelvis was considerably diminished at the brim, but especially so at the outlet.

This aperture was considerably contracted in its transverse diameter, and was estimated to measure in its widest part not more than 1½ inch, but between the tuberosities of the ischia, it was narrower, and still less between the rami of the pubis and ischia; in fact, the lower opening of the pelvis was converted into a long narrow slit. The tumour which was felt during vaginal examination was now ascertained to be the head of the child, arrested at the brim of the pelvis. The os uteri appeared to be about half dilated. The vagina, hot, tumefied, inflamed, was so exquisitely painful that when examined she screamed in great agony. The vaginal canal inspected by one of my colleagues when an attempt was made to pass the catheter was observed to be intensely red and injected. The pulsations of the fœtal heart were audible, likewise the placental murmur. It was thought that the placenta

was situate on the right latero-posterior part of the uterus. After full consideration of all the circumstances of the case, it was decided that the Cæsarean section should be performed. Accordingly at 3 p.m. the patient was placed on a bed in a ward, the temperature having been raised to 75°. An attempt to pass the catheter was made unsuccessfully, in consequence of the child's head pressing so firmly on the upper portion of the urethra. The situation of the projected line of incision being marked with ink, two jets of ether spray were continuously played upon it.

In the presence of Drs. Radford, Ogden, Nesfield, Ingle, and Samelson, Messrs. Pettinger, Heslop, Swift, Kershaw, Runcorn, and Orton, I commenced the operation by making an incision through the abdominal parietes, on the right side of and parallel to the linea alba, commencing two or three inches above the umbilicus, and carrying it downwards towards the pubis to the extent of six inches. The peritoneum being now exposed, and a small opening made, a director was passed, and the membrane divided to the extent of the external cut. The uterus being now fully exposed, an incision was made through this organ, extending from the fundus to the cervix. I passed my hand through the uterine wound, and after rupturing the membranes, seized the feet of the child, which lay with its head in the first position. Mr. Pettinger, who was kindly assisting me, seized the head, and raised it out of the uterus.

The child (a girl), although alive, was in an extreme state of asphyxia, but Mr. Runcorn, to whom it was entrusted, diligently and successfully employed Dr. Sylvester's method of resuscitation. After the removal of the child, I introduced my hand into the uterus, and detached the placenta, with the membranes, from the right latero-posterior part of that organ. To ensure a free exit of any fluid from the cavity of the uterus through the os, I again passed my hand, and removed a small portion of membrane which lay over it. After its withdrawal, the uterus immediately contracted, but the outer edges of the uterine wound did not so nicely approximate as was to be desired.

During the operation scarcely any blood was lost, either

from the edges of the abdominal and uterine wounds, or from the cavity of the uterus.

Great care was taken during the progress of the operation to prevent the protrusion of the intestines; and after its completion I carefully ascertained that no portion of these organs had passed through the uterine wound. After removing small coagula from the abdominal cavity, the edges of the external wound were brought together, and secured by six silver wire sutures, which were passed through the peritoneum. Strips of plaster, cotton wadding, and a flannel roller completed the dressing. She bore the operation well, and uttered little complaint during its performance.

Her pulse was 96. She was now made comfortable in her bed, and afterwards slept five hours. Late the same evening I found the belly tympanitic, very tense, and rather painful. The bandage, therefore, was cut, which gave great relief. She vomited repeatedly some thin watery fluid. Twenty minims of Battley's sedative were administered, which allayed the vomiting, and procured a short sleep.

Sunday morning.—She had slept but little. Pulse 120. At 3 a.m. she was seized with a severe pain in the right side of the abdomen, and vomited. Twenty minims of Battley's sedative slightly relieved the pain, but the vomiting continued and became excessive. The fluid ejected was at first clear, then green and yellow. She was now greatly exhausted, and her pulse rose to 130: became thready, and her features were collapsed. A few minims of a solution of morphia were injected hypodermically, which produced temporary relief, and a short sleep. On awaking, the distressing symptoms returned. At 7 a.m., the vomiting and pain still continuing, the hypodermic injection was repeated. The vomiting soon ceased, and she fell into a tranquil sleep until the middle of the day. When she awoke, the unfavorable symptoms recurred, the hypodermic injection was successfully repeated, and she slept comfortably until 6 p.m.; her pulse at this time was 130. She had taken during the day a little iced milk, beef-tea and brandy.

Monday morning.—She had slept at intervals during the night, her pulse was 130; the abdomen still tympanitic.

In the evening her pulse was 130; the abdomen still tympanitic; she had vomited occasionally during the day. She partook to-day more freely of milk and water, beef-tea, and brandy.

Tuesday morning.—Has passed a restless night, and vomited occasionally; pulse 150; the abdomen still tympanitic. In the evening her pulse was still 150; she complained of pain in the epigastrium; a turpentine injection was administered, after which she experienced great pain about the pubis, and passed a small dark-coloured motion; a very offensive discharge flowed from the vagina all day.

Wednesday morning.—She is not so well, and has slept only two hours; pulse 142. In the evening pulse 146. She has taken little nutriment.

Thursday morning.—She has had an uninterrupted sleep of about four hours; tongue very dark coloured, and sordes about the gums and lips; repeated and profuse vomiting of bilious matter.

Thursday evening.—Pulse 146 and thready; features collapsed; an injection of beef-tea was rejected almost as soon as administered, accompanied by a small quantity of fæces. Dark-coloured and very offensive discharge from the vagina. She took about a mouthful of chicken and six or eight ounces of broth, and drank a bottle and a third of soda-water with brandy. In the afternoon profuse, cold, clammy sweats came on, she tossed about restlessly and excitedly in bed, and became very prostrate. At 9 in the evening a solution of morphia equal to half a grain administered hypodermically procured sleep.

Friday morning.—She had passed a very restless night, the prostration and excitement had increased, and she died at five minutes past seven.

Post-mortem examination.—Body but slightly emaciated. The external wound, excepting a very small portion in its centre, had become united; its edges were covered with effused lymph. On opening the abdomen some puriform matter was found embedded in the parietes. The peritoneal surface of the intestines was inflamed, and the convolutions were slightly adherent. There was only a small portion of

serous effusion in the abdominal cavity. The peritoneal coat of the uterus was a little inflamed, and this organ was slightly adherent to the parietal portion of the peritoneum. The uterus was generally flabby, and the edges of the wound which were everted, were particularly so. The lower portion of the cervix was soft, dark coloured, the os patulous and nearly black, as if gangrenous. The whole internal surface of the uterus was found much darker and rougher than natural. The pelvis was removed, cleaned of all soft parts, and then was accurately measured.

I have given two finished drawings of the pelvis. No. 1 representing the brim, and No. 2, the outlet.

I have also appended three outline sketches showing the brim, cavity, and outlet, with their dimensions.

Remarks.—The malformation of this pelvis is caused neither by rickets nor by mollities ossium. It will be observed that it presents neither in shape nor in other characteristic appearances the least resemblance to a pelvis deformed by rickets.

It differs also very considerably from a pelvis distorted by mollities ossium, particularly as to the shape and texture of the bones, and in the configuration of the superior aperture and cavity.

Although there is a notable difference between the outlet in the pelvis, the subject of this case, and one distorted by mollities ossium, yet there *is* some resemblance between the two in regard to the jutting forward of the rami pubium, and the approximation of the rami pubium and ischiorum and of the tubera ischiorum. In its general contour it is much smaller than natural, and the several bones are more delicate and slender. The central portions of the ilia, and the anterior portions of the planes of the ischia, are remarkably thin, as is well exemplified by placing them between the eye and a lighted candle; between the sacrum and ilium on the left side, and as nearly as possible on the right side, there is complete anchylosis or bony consolidation. There is not the least trace on either side of a normal sacro-iliac synchondrosis. The sacrum is smaller than natural. It is

less developed, and the foramina are placed nearer to the edge on the left than on the right side of the bone. The space between the outer edge of the sacro-vertebral articular surface is shorter or less on the left side. The symphysis pubis is not quite opposite the centre of the promontory of the sacrum, but inclines a little towards the right, and the linea ileo-innominata is rather straighter on the left than on the right side, although even here this line is not curved to the same extent as in a normal pelvis. The brim partakes more of the shape of the male than of the female, its antero-posterior diameter measuring considerably more than the transverse. The antero-posterior diameter of the cavity is considerably longer, in consequence of the great concavity of the sacrum, whilst its transverse is considerably diminished. The outlet is comparatively much more contracted than the brim, the diminution existing in its transverse diameter. On the posterior part of the pelvis the ilia project to a remarkable extent beyond the sacrum, producing a deep sulcus or cavity. The existence of pregnancy was not suspected by the patient's friends until a short time before her labour. She enjoyed tolerable health, and until labour had commenced there was no evidence of any pelvic malformation. The exact duration of her labour is a little uncertain, but there is, perhaps, sufficient evidence to show that it had lasted longer than was desirable, and there is presumptive evidence that the membranes had ruptured at an early period. The jolting journey in a cart (unavoidable in a country place where no better vehicles could be obtained) during labour, especially as the liquor amnii had been discharged, no doubt had an injurious effect. To the end the tonic contraction of the uterus was strong and continuous, but it is very remarkable that the alternate contractions or labour pains were as nearly as possible suspended. This freedom from labour pains clearly shows that uterine energy had been exhausted; yet, notwithstanding this, the lower segment of the uterus was subjected to great and continual pressure, and its ill effects are shown by the state of the os and cervix uteri. The inflamed and exquisitely sensitive state of the vagina was, I think, produced by the frequent

examinations. The gaping state or want of apposition of the uterine wound may, I think, have been due to the application of the æther spray used in the hope of obtaining a better contraction of the uterus, thereby preventing hæmorrhage, but I would not again douche the uterus with it, as I surmise it had the effect of hardening the uterine tissue, and thereby preventing a sufficiently nice adaptation of the edges of the wound. By driving away the blood from the cut surfaces it would also interfere with the effusion of plastic lymph, and consequently diminish the chances of union by the first intention.

Further, it appears probable that hæmorrhage, which has been prevented by the application of cold, would be very likely to take place on reaction setting in.

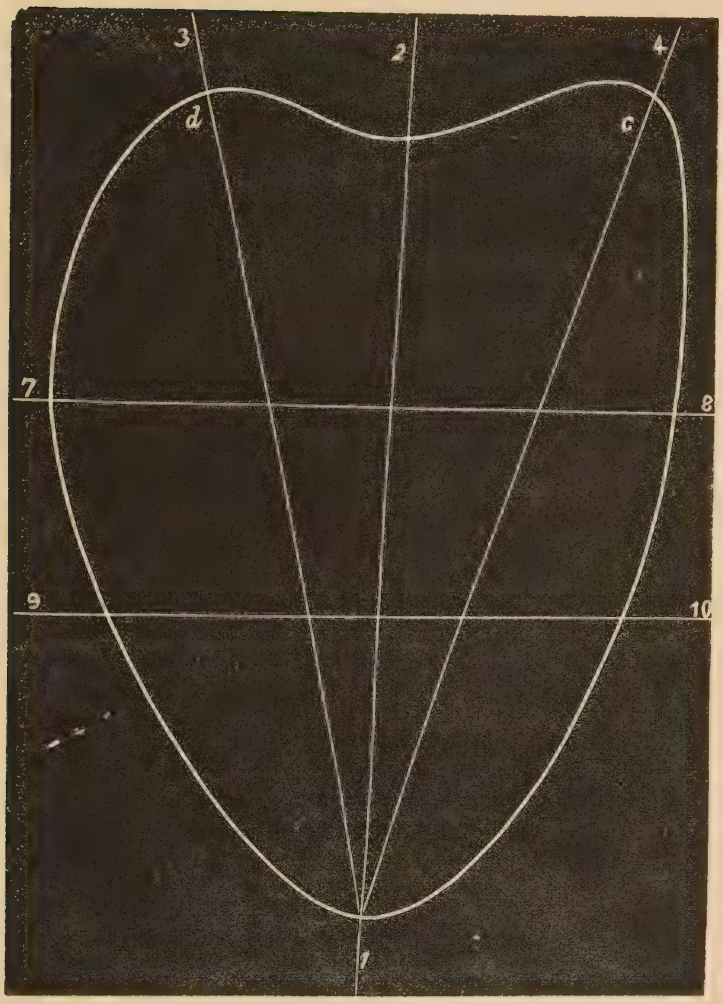
Dimensions of the large or upper pelvis.

	Inches.
From one superior anterior spinous process of one ilium to that of the other	$8\frac{1}{4}$
From one anterior inferior spinous process to that of the other	6
From one posterior process of the ilium to that of the other	$1\frac{6}{8}$
From the centre of the crista of one ilium to that of the other	8
The unusual length of the projection backwards of the ilia beyond their junction with the sacrum . .	$1\frac{6}{8}$

Outline Fig. 1 *represents the brim of the true pelvis and its dimensions.*

No.		Inches.
1—2.	From the upper edge of the base of the sacrum to symphysis pubis	4
1—3.	From the symphysis pubis to the line of the sacro-iliac junction on the right side . .	$4\frac{3}{8}$
1—4.	From do. to do. on the left side . . .	$4\frac{1}{2}$
5.	From line of sacro-iliac junction to the junction of the last lumbar vertebra on right side	$\frac{7}{8}$
6.	Do. do. on left side	$\frac{4}{8}$
7—8.	Across from one side to the other opposite the posterior part of the acetabula . . .	$3\frac{2}{8}$
9—10.	Across from one side to the other opposite the anterior part of the acetabula . . .	$2\frac{6}{8}$

Fig. 1.

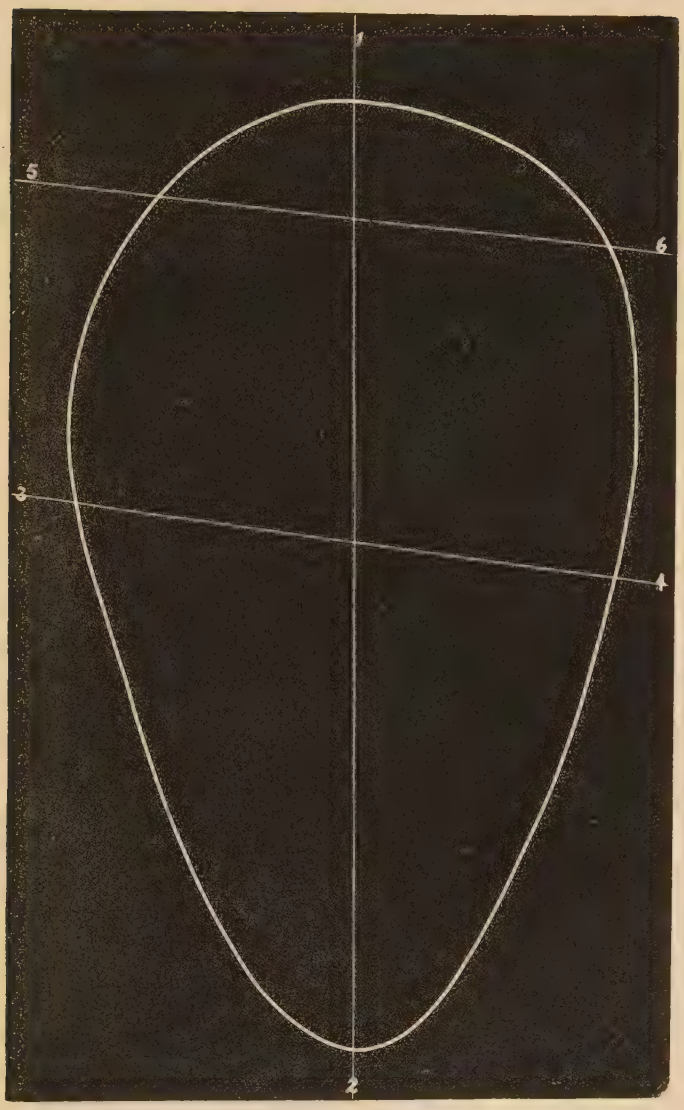


Outline of the brim of the pelvis.

Fig. 2 represents the cavity and some of its dimensions.

No.		Inches.
	Depth on right side	$3\frac{6}{8}$
	Depth on left side	$3\frac{6}{8}$
	Depth at symphysis pubis	$1\frac{2}{8}$
	Depth on the posterior in a straight line from base of sacrum to the point of the coccyx .	$3\frac{5}{8}$
1—2.	From the middle of symphysis pubis to the middle of the concavity of the sacrum .	$5\frac{1}{8}$
3—4.	Across from one side to the other (transverse) opposite the middle of acetabulum . .	$2\frac{6}{8}$
5—6.	Width across the middle of the sacrum .	$2\frac{3}{8}$
	Depth of the concavity of the sacrum shown by a line drawn from the promontory to the apex	$\frac{6}{8}$

Fig. 2.

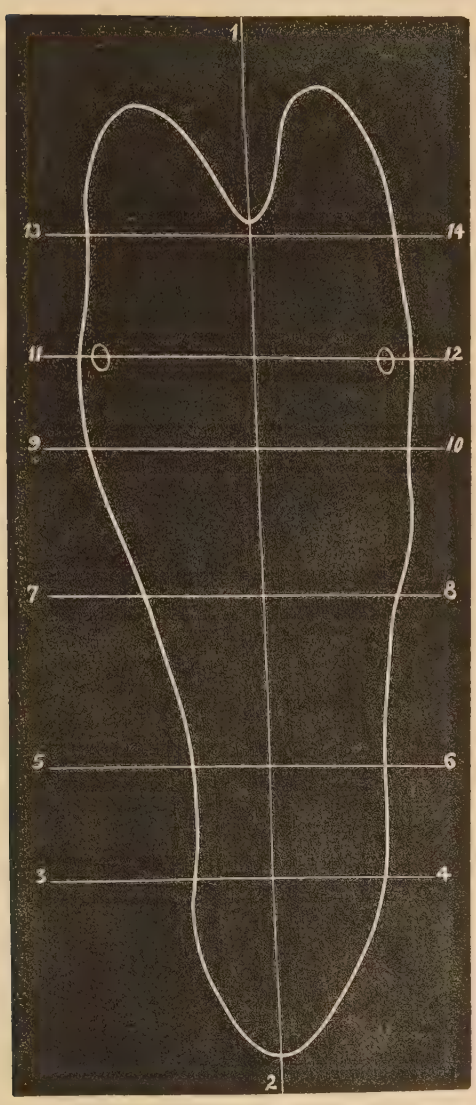


Outline of the cavity of the pelvis.

Fig. 3 represents the outlet and its dimensions.

No.		Inches.
1—2.	From the point of the coccyx to the under edge of the symphysis pubis . . .	$4\frac{3}{8}$
3—4.	Across from one ramus pubis to the other nearly an inch below the symphysis . .	1
5—6.	Across from do. to do. opposite the lower part of the foramina thyroid	1
7—8.	From the centre of one tuber ischia to that of the other	$1\frac{2}{3}$
9—10.	From one sacro-sciatic ligament of one side to that of the other	$1\frac{6}{8}$
11—12.	From one ischial spinous process to the other represented by o. o.	$1\frac{3}{8}$
13—14.	Across from one sacro-sciatic ligament of one side to that of the other at the point of the coccyx	$1\frac{5}{8}$

FIG. 3.



Outline of the outlet of the pelvis.

Dr. Graily Hewitt had had an opportunity of seeing the pelvis previous to the meeting. It was a most interesting instance of the pelvis technically known as "Roberts' pelvis," and only two or three such he believed had been described. The peculiarity in the shape arises from the occurrence of anchylosis of the sacrum on both sides to the adjacent bones, differing from Naegelé's oblique ovate pelvis in the fact that in Roberts' pelvis the anchylosis was on both sides, in Naegelé's on one side only.

Dr. Greenhalgh remarked that he had never seen a pelvis similarly distorted. He was disposed to attribute the deformity to arrest of development of the sacrum, to which the ossa innominata were firmly anchylosed, and in depth it resembled the male pelvis. In Naegelés' museum Dr. Greenhalgh had seen somewhat similar specimens, but confined to one side, constituting the oblique pelvis of that author.

ON THE RELATIVE VALUE OF THE VARIOUS SUBSTANCES WHICH HAVE BEEN USED IN DILATING THE NECK OF THE WOMB; WITH A PLAN FOR DEODORIZING SPONGE-TENTS.

By J. H. Aveling, M.D.,

SENIOR MEDICAL OFFICER TO THE SHEFFIELD HOSPITAL FOR WOMEN; HONORARY MEMBER OF THE OBSTETRICAL SOCIETIES OF EDINBURGH AND DUBLIN.

Tent (Synonymes).—Tenta, Turunda, Turundula, Peniculus, Penicillus, Linamentum, Licinium, Collyrium, Cuneolus, Cylindrus, Lemniscus, Styliscus.

Dilating tents have been used from the earliest ages, and the substances of which they have been made are as numerous as the writers who have described them. The carrot and turnip have been used for this purpose, besides the roots of many other plants, of which the following is a very imperfect list: Bryonia, Aristolochia, Cyclamen, Dracontium, Symphytum, Asarum Europæum, Calamus Aromaticus, Plantago lanceolata, and Gentiana lutea. Of all these roots, the last mentioned

has been longest and most in use. It dilates more rapidly and to a greater extent than any of the others. I shall, therefore, not trouble you with minute details of the experiments made upon them, but shall confine myself to laying before you the result of investigations made concerning the expansibility of gentian root. Dioscorides, I believe, is the first author who mentions gentian tents, and from his time down to the present day they have not long been out of use. Rogerius and Ettmuller mention the names of several roots for making tents, but give the palm to gentian root. I have very frequently used it, and can say from experience that it makes a very good tent. It dilates more rapidly than sea-tangle, but not to the same extent. It is cheap, easily obtained, and readily cut into the desired form.

Dilating tents have for many centuries been made of pith. That found in canes has been much used. Fabricius ab Aquapendente speaks highly of the expanding power of "medulla sorgi." The pith of the elder has, however, been most used in this country. Its advantages are that it is easily compressed, and when moistened it enlarges rapidly. Dead pith expands nearly as much as sea-tangle, and would be admirably adapted for making tents, were it not for the one drawback pointed out in the fourteenth century by Guido, "Tenta de medulla sambuci et ebuli non placet me," he says, and he gives as his reason, "in extrahendo sæpe frangit." This unfortunate friability renders pith an unsuitable and dangerous substance to make tents of, although it must be admitted that it is in most respects everything one could desire.

Dr. Storer has recommended the employment of the bark of the slippery elm for making tents. This also in its natural state is too brittle to be used with safety. Dr. Storer has, however, succeeded in manufacturing a safe tent out of it. "By disintegrating the fibres from each other, a mass of flexible, tough, spongy tissue is obtained, readily moulded into the desired shape." The chief advantage claimed for the elm tent is that, in dilating, its surface becomes coated with mucilage. Its expansibility is neither rapid nor great.

Tents have also for many years been made of cotton, lint,

tow, and wool, but they have no special advantages. They dilate in a small degree.

A few years since (1862) Dr. Sloan suggested that dilating tents should be made of the dried stem of the sea-tangle (Laminaria digitata). The great advantage of this tangle tent is its large expansibility. In this respect it exceeds that of elder pith and gentian root, and almost equals that of sponge. It is, however, hard, polished and metal-like, and is with difficulty retained in the uterus. To avoid this tendency of slipping out, worsted has been wound round it, to roughen it, and the vagina has been partially plugged to hold it in its place. Another disadvantage is the uncertainty as to the time it takes to dilate. Sometimes this process has not been completed in twenty-four hours. The tangle tent as modified by Dr. Greenhalgh partly removes this objection. When a very fine tent is required, that made of Laminaria digitata is superior to every other; and in commencing the dilatation of narrow strictures, no other substance will probably ever be found to take its place.

Of all tents, those made of sponge have been used the longest and most often. My late learned friend, Dr. Adams, of Banchory, says that sponge tents were used by Dioscorides, although I must say I have sought in vain in the writings of that author for any mention of them. It is certain, however, that they were used in the time of Ætius. In the chapter "De uteri obturatione," he says, "At vero si loci ad tactum molles-fuerint, spongiam siccam funiculo appenso intra locorum angustias dilatandi gratia indemus. Et si ea exciderit, aliam crassiorem immittemus." They are also mentioned again in the chapter "De utero non perforato." After this time they are constantly referred to by medical writers, for I find from notes beside me that I have met with accounts of them in eighteen different authors. The principal reasons why sponge has always been the substance of which tents have been made are, that it dilates more rapidly and to a greater extent than any other. Its one great drawback is the inexpressibly disgusting smell it has after resting in the uterus for a few hours, and which, wash as you may, you cannot get your hands free of for some time.

It is also a serious question whether the discharge from which this smell arises is not one calculated to set up morbid action in the uterus and the parts annexed. For the safety of the patient therefore, as well as for the comfort of the medical attendant, it is desirable that this one great objection should be removed. Mr. Ellis accomplishes this end by means of carbolic acid. I have been trying permanganate of potash. Messrs. Cubley and Preston, druggists, of Sheffield, have prepared deodorized sponge tents for me in the following way:

A conical piece of solid Turkey sponge is transfixed in its long axis by a silvered knitting needle, and tightly bound round with twine. When dry, the needle is withdrawn, leaving a tubular opening throughout the whole length of the tent. After the tent has been filed into shape, and rubbed smooth with sand-paper, its smaller end is sealed with a drop of melted white wax, and it is then ready to be filled. This is a delicate operation. The permanganate of potash must be very finely powdered, and dropped into the tent in extremely small quantities, and shaken down carefully, or the tube becomes clogged. When full, it is closed with another drop of wax, and having passed a small thread of silk through the end of it, the tent is ready for use. I have had them made of various sizes, and numbered according to their lengths as follows:

Number .	1.	2.	3.	4.	5.	6.	7.
Length .	1 in.	$1\frac{1}{4}$ in.	$1\frac{1}{2}$ in.	$1\frac{3}{4}$ in.	2 in.	$2\frac{1}{4}$ in.	$2\frac{1}{2}$ in.

This plan of numbering sponge tents according to their dimensions may be useful both in ordering the size of tent you require, and in describing how large a tent has been used in the treatment of a case.

I will merely add that the deodorization takes place in the following manner:

Until the tent has dilated to its very centre, the charge of permanganate (about two grains) remains undisturbed. It then gradually dissolves, and in solution renders the tent so perfectly sweet that upon its removal no unpleasant odour can be detected.

AN OBSTETRICAL REGISTER.

By Draper Mackinder, M.D., &c.

"The pictures drawn in our minds are laid in fading colours, and, if not sometimes refreshed, vanish and disappear."—Locke.

The busy practitioners in small provincial towns and in rural districts have rarely much time for literary occupation, though the materials at their disposal are often of immense value, and, if rightly collated, might prove no mean helps towards the solution of some of the problems which engage the philosophic medical mind. Not only from the earliest premonitory symptoms to the termination of any particular disease is everthing known to them, but the whole history of the patient, mental, physical, moral and social, with probably the habits and idiosyncrasies of an antecedent generation, and all the collateral circumstances which may influence and regulate health.

For many years past I have taken notes not only of important cases, but of every case of which I have had the charge, and have now accumulated a library of reference, which I regard of no insignificant value. At a moment's notice I can ascertain the prominent features of any case once prescribed for and read off the treatment, see the rocks and sandbanks by which my patients were nearly wrecked, and, profiting by past experience, prepare myself for the future. Nor is my system elaborate or tedious; brief but explicit notes are recorded at the time the case is entered in the journal.

For my obstetric cases I have found it more convenient to keep a separate register, which is always at hand, and is used whilst the details are fresh on the memory. At first my plan was very simple,—too simple to be useful; later it was more comprehensive; afterwards I adopted the form recommended by this Society; and now, not being quite satisfied with that, I have, I think, as far as is consistent with the necessities of

short case taking, embraced every item which is likely to advance our knowledge of the subject.

The man who is already in the sere and yellow leaf cannot be expected to fill up such columns as these unless his habits be congenial; but the younger men, the men of energy and ability, men who aspire to excellence and usefulness, and who wish to adorn and enrich the noble profession to which they have been called, and leave the world wiser and better than they found it; such young disciples of obstetricy may, I think, be fairly asked to contribute the daily addenda of their experience for the general good, and more especially when, by the use of a well arranged register, they can do so without any perceptible loss of time.

After the fashion of the book now printed by Smith, of Long Acre, but larger and on thicker paper—paper like that used by the Poor Law Board for their "Medical Report Books"—and arranged for one, two, or three thousand cases, I should bring out this register. Each double page should be ruled transversely for ten cases, and have twenty-nine columns headed as follows, the last column for general remarks, being much larger than the rest. I should also have a few fly sheets with transverse lines, to be used at the discretion of the owner.

Headings.

1. Number of labour and initials of attendant.
2. Name and address of patient.
3. Age.
4. Married.
5. Single.
6. Number of previous pregnancies.
7. Number of previous labours at full term.
8. Duration of last lactation.
9. Time when last catamenia appeared.
10. Time when last catamenia ceased.
11. Date of impregnation.
12. Date of fœtal movements being first perceived by mother.

13. Time when confinement was expected.
14. Time of first visit and condition of patient.
15. Time of first escape of watery fluid from the vagina.
16. Time and manner of rupture of membranes.
17. Presentation.
18. Day of the month delivery was effected.
19. Time of the day.
20. Length, condition, and position of funis.
21. Time when placenta was removed, and its peculiarities.
22. Duration of labour.
23. Labour natural, or assisted, and how?
24. Complications.
25. Child living or still, sex, condition, and peculiarities of infant.
26. Date of last confinement.
27. Probable cause of prolonged inter-pregnant period.
28. When the attendance ceased, and state of health of mother and infant.
29. General remarks.

Many probably will deem this register unsuited to busy, practical men, but a short use of it will convince them of the contrary—at least, such of them as think it worth while to keep a register at all; and the information thus obtained will amply compensate any one for the robbery of a little unutilised time.

To half of these questions I get answers in my pocket-book when the parturient woman engages my attendance, and I simply transfer them when the labour is over. This not only helps the memory and facilitates the work in hand, but serves as a forewarner of the duties we have to perform, and is especially valuable where more than one person is concerned in the management of the practice.

A CASE OF MONSTROSITY.

By Archibald Hall, M.D. Edin., L.R.C.S.E.,

PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN, M'GILL UNIVERSITY, MONTREAL, CANADA EAST; HONORARY FELLOW OF OBSTETRICAL SOCIETY, LONDON.

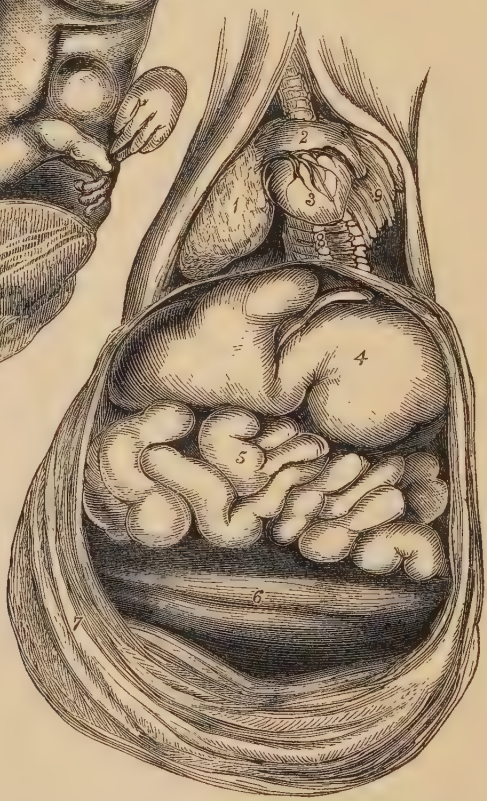
The following extraordinary case of monstrosity occurred in the University Lying-in Hospital under my charge, in the year 1863, and deserves some prominent record in the 'Transactions of the Obstetrical Society of London,' and I accordingly have pleasure in transmitting it through my friend Dr. Silt.

An abstract from the case book of the hospital embodies the subsequent remarks.

M. R—, æt. 23, first accouchment, admitted August 2nd, 1863, confined the same day; twins; unmarried. "This was a case of twins—the first was a sacro-iliac presentation, and was born healthy and perfect after about five hours' labour. In about ten minutes a second child was found presenting by the vertex in the first position, and in a few minutes was born. It proved to be a monster, and its general external characteristics were as follows:—Neck as large as the head; apparently no vertebra after the dorsals; the cuticular covering wanting in the abdomen, below the thorax, which was apparently well formed; the abdominal cavity terminated in a rounded point. The monster possessed two arms, which were flexed on the chest, but the joints were anchylosed. There was only one leg, the right one, which seemed to spring from the last dorsal vertebra posteriorly, turning round the side, and becoming flexed on the abdomen in front. Its joints were also anchylosed. Opposite the inner ankle sprang what had every appearance of a finger, having at least two phalanges, and nearly as long as the monster's little finger. A slight papilla occupied a corresponding portion of the

Fig. 1.

Fig. 2.



1. Right lung. 2. Left ditto. 3. Heart. 4. Liver. 5. Intestines. 6. Stomach. 7. Sac containing abdominal viscera, &c. 8. Vertebra. 9. Ribs.

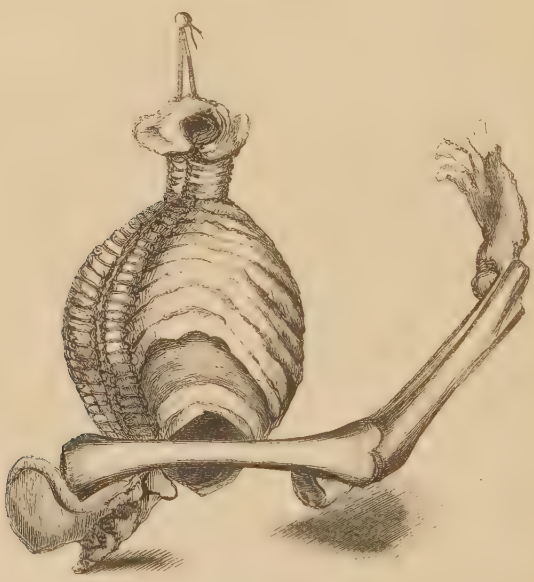
outer ancle. Through the peritoneal covering of the abdomen could be distinctly seen the abdominal viscera. It is needless to say that the monster was dead born. It had two deciduous teeth on the upper jaw, viz., the two middle incisors. It was not weighed or measured, a customary practice in the hospital. Finally, the umbilical cord, which was barely one half inch in length and broken at the accouchment, entered at the lowermost middle point of the right hypochondriac region, and is probably an example of the shortest umbilical cord on record, as there was nothing in extent worth mentioning attached either to the fœtus or the placenta.

On laying open the thoracic and abdominal viscera, a most singular transformation was discovered, of which fig. 2 gives us a very fair delineation. The right lobe of the lining was *in situ,* but the left lobe occupied the upper portion of the thoracic region, the remaining portion being occupied by the heart. In the abdomen the first object which attracted attention was the liver, which, from its enormous development, its lobes occupied exclusively the upper portion of the abdominal cavity. Beneath this were observed the abdominal viscera, which within the sigmoid flexure terminated abruptly near the pectineal line of the pubes on the left side, obliterating thus all communication with the anus, which was imperforate. The stomach was discovered stretched across the abdominal plane, below the convolutions of the intestines, and instead of exhibiting the ordinary appearance seemed nothing more than an oval sac lying across the lumbar region. This drawing, which was most accurately made by my young friend Mr. (now Dr.) Duncan, does not disclose any deeper seated structures or viscera, but it will suffice to say that not the least trace of kidneys or woolfian bodies could be detected, and along with their ablations occurred also that of the uterus and bladder, unless an extremely minute and apparently consolidated body, scarcely larger than a cardamom seed, could be supposed to be the undeveloped organ. There was not the slightest trace of external genitals, and there were therefore no means of determining whether the monster was male or female. Fig. 2 gives a very faithful repre-

sentation of the thoracic and abdominal viscera after exposure.

The skeleton which, with the exception of the bones of the cranium, was carefully removed and converted into a natural one by my friend Dr. Fenwick, Demonstrator of Anatomy, McGill University, exhibits also some most remarkable peculiarities. Its size is entirely disproportionate to the mass of the body. The number of cervical vertebræ is six,

Fig. 3.



and I cannot determine more than ten dorsal vertebræ to the ten ribs, and which are so peculiarly constructed that the first rib is as long as the last one. The number of lumbar vertebræ, with what ought to constitute the sacral ones, on a close examination I cannot make out to be more than eight, while an extremely rudimentary pelvis is attached by its crests to the lateral processes of the fifth, sixth, and seventh, thus twisting it completely to one side. From the acetabulum of the right side proceeds the femur, far more stoutly organised than any other portion of the frame. This termi-

nates in two tibia, both of the latter looking inwardly. These finally end in one set of tarsal and metatarsal bones, the external appearance of which I have already described.

It was my intention to have given to the Society a minuter anatomical detail than what I have been enabled to do. For this I depended entirely upon the investigation of a gentleman into whose hands I placed the lusus naturæ for this purpose, and after waiting for nearly three years I have only to express my extreme disappointment in this regard. The case is, however, by no means devoid of interest, albeit deprived of that essential requisite.

A CASE OF PUERPERAL FEVER, OR PUERPERAL PYÆMIA, AFTER AN ABORTION; WITH REMARKS.

By T. Snow Beck, M.D. Lond., F.R.S.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS.

Early in the morning of October 6th, 1866, I received an urgent request to visit H. W—, but, on arriving at her residence, found that she had expired half an hour previously. I had seen her a few weeks before, and knew her to be then in good health. She was rather more than four months advanced in pregnancy, and there is every reason to believe means had been adopted to induce an abortion. She was twenty-six years of age, rather short stature, broad make, good conformation, and good constitution.

The following particulars were received from the nurse who attended her:—A fœtus was expelled on the 30th September, and followed by the after-birth, which was burnt in the usual way. For a fortnight previous she suffered from severe pain in the forehead and through the

temples. Little blood was lost at the time of the expulsion of the fœtus. The pain in the head continued afterwards, but not so great; had severe pain in the stomach, which, towards the latter part, "was as strong as if going to have another miscarriage;" she complained of great pain when moved. Soon after the miscarriage had great pain in the chest, with shortness of breath; could not lie down, but always maintained, more or less, the reclining position; complexion dirty and muddy; frequently complained of the feeling of great weakness; intense thirst; constant retching; cold, clammy perspirations, followed by hot feelings; pulse extremely rapid; mind clear and perfect, though wandering at times. Sometimes became much excited from trifling circumstances, and the day before her death insisted upon going to a friend's, and went some distance in a cab. During the night of her decease had great difficulty in breathing; could only remain in the sitting posture; frequently expressed a conviction that she would not get over it; the speech became thick; the difficulty in breathing increased; the lips became dark and livid; some stupor came on and she quietly sank about 7 a.m.

Examination of the body thirty-one hours after death:—

Generalities.—Weather cool; body well fed; skin of a tawny muddy appearance; face slightly bloated; slight green discoloration at each side of abdomen; rigor mortis not strongly marked.

The head.—Not examined.

The chest.—The lungs did not collapse; from six to eight ounces of clear brown-coloured serosity in each pleural cavity; over the base of both lungs, and on the surface of the diaphragm, a rather thick layer of soft lymph; both visceral and parietal pleuræ smooth, shining, not injected; posterior lobes of both lungs very dark coloured, almost black; congestion lobular. When divided, a thin dark-coloured blood escaped; lungs crepitant; many small, slightly raised, light yellowish patches, from the size of a small pea to that of a bean, strewed over the surface of the lower part of the inferior lobes. On dividing the pleura,

these pus-like collections resembled soft jelly, retained their form, were of a yellowish-white colour, and with the microscope showed many pus-like corpuscles, granular corpuscles, corpuscles partially covered with granules, contained in a soft homogeneous matrix; the surrounding lung substance soft, thin, and apparently unchanged, further than being charged with thin dark blood; the lymph or exudation on the surface of the pleura appeared to have the same composition, only the matrix was firmer and more resembled soft membrane; no effusion into the pericardium; surface natural; heart natural; left cavities empty, right cavities contained some thin, dark, blackish-coloured blood, with small dark coagula, and one soft, jelly-like coagulum extending into the large vessels.

The abdomen.—Rounded and prominent; percussion note tympanitic; considerable amount of fat in abdominal walls; intestines much distended with flatus; parietes thin, not injected. About twelve ounces of clear brownish-coloured serosity in peritoneal cavity; peritoneum not injected; pelvic portion covered by a rather thin irregular layer of soft lymph; stomach apparently natural; liver natural; kidneys not examined; uterus occupied the cavity of the pelvis, rather soft and flabby to the feel, slightly injected on the fundus and posterior surface, which parts were covered by soft lymph or exudation; ovaries of natural colour, surface as if dusted with coarse sand; Fallopian tubes swollen, much congested. The whole removed for further examination: very little dark-coloured fluid blood escaped from the veins when divided.

The uterus measured four and a half inches long, and three inches across the fundus; was soft and plump-like to the feel, the orifice open, round, whilst a rounded dark claret-coloured body projected into it from the uterine cavity; the inner margin of the lips had a somewhat fine, honey-comb appearance from the open orifices of enlarged mucous crypts, the outer portion finely granular from enlarged villi on the surface; the anterior wall, divided longitudinally, appeared natural. The incision carried through

the fundus to the posterior wall, showed the uterine substance of a pink red colour, deeper at the inner surface; many vessels divided, several of which contained a little red claret-coloured fluid blood; two or three of the divided sinuses contained (loose in their cavities) a soft, yellowish, jelly-like substance, which showed, with the microscope, pus-like corpuscles, and granular corpuscles in a soft homogeneous matrix—indeed, a composition similar to that of the exudations on, and deposits beneath, the pleura; from others near the inner surface, and at the seat of the placenta, extruded a thin, yellowish, saneous-looking fluid, a portion of which was preserved, mixed with glycerine; the uterine cavity of considerable size, stained dark red, occupied by a dark-coloured mass, adhering to the posterior wall near the fundus, where the placenta was attached; the surface smooth, compact, friable—evidently coagulated blood; the attached surface saturated with purulent fluid. After maceration for some days in bay-salt and water, it broke down under a stream of water, and came away in fragments, leaving, however, a thin portion of the placenta adhering to the walls of the uterus; the end of a small syphon ear-syringe introduced into the large veins of both sides and water gently injected, this fluid readily passed along the veins and sinuses, and escaped into the cavity of the uterus at the part where the placenta had been attached—at the right side, where only long shreds remained, it turned these aside, and escaped by round, open, well-defined openings—at the left side, where a portion of the placenta yet remained, it traversed this portion, and escaped from large, round, natural orifices in it; the sinuses from the posterior wall of the body were then traced inwards towards the adherent portion of placenta. Their walls were clear, shining, transparent, without any injection, and, to all appearance, healthy. As they approached the inner surface, they divided more and more, leaving only thin bands of uterine tissue between them, and presenting a peculiar open plexiform structure, composed of large canals separated by short and thin bands: this structure

was continuous into the adherent portion of the placenta by the large sinuses, lined by a smooth, shining, continuous lining membrane; nowhere was there any appearance of an interposed membrane between the uterine sinuses and the placenta,—indeed, the appearances according with the descriptions of Hunter, John Reed, Owen, Goodsir, and others; the cavity of the uterus divided into two portions—the upper one larger, rounded, and measuring three inches in length; the lower one one inch and a half long, and cylindrical, chiefly formed by the cavity of the cervix; the surface smooth, no shreds, the plicæ retained much of their penniform appearance, though softer and apparently undergoing the process of unfolding; no villi nor mucous crypts were found on the surface of the plicæ, which, with the microscope, were composed of simple foldings of the soft internal tissue of the uterus, no contractile fibre-cells being detected; in the sulci, the mucus crypts appeared as usual; immediately within the orifice the villi were large and numerous, and consisted of elongations of the internal soft tissue; the upper portion—the cavity of the body—everywhere covered by shreds of soft tissue, except where a part of the placenta remained: at the part where the placenta had been separated, these shrouds were much longer and larger; microscopically the shreds consisted of a homogeneous matrix, small corpuscles, nuclei, and numerous enlarged nuclei which were elongated, oval, and many assuming the spindle form; the uterine tissue immediately beneath, or outside, the inner surface was composed of similar elements, though in different proportions; the homogeneous matrix, small corpuscles, and nuclei in less amount, whilst the enlarged nuclei largely increased in numbers, and with many distinctly formed fibre-cells were arranged in the form of fine bands; the uterine tissue nearer the centre of the walls was composed of the same elements, only the distinct fibre-cells largely predominated; the larger shreds where a part of the placenta had been detached, as well as the firmer bands of the still adherent placenta, consisted microscopically of the same elements as the soft tissue at the inner sur-

face, the enlarged papillæ on the lips, or vaginal portion, and which gave a fine granular appearance, existed in great numbers; the papillæ on the surface of the upper part of the vagina were also much enlarged and numerous, though considerably less marked than those on the lips of the uterus.

Thus, a young lady, twenty-six years of age, in perfect health, but a little more than four months advanced in pregnancy, had an abortion induced. The nurse stated she was confident no medicine had been administered. A fœtus was expelled, and the placenta believed to have come away as usual. Little blood was said to have been lost at the time of the abortion, yet pains continued and increased so as to resemble those which accompanied the expulsion of the fœtus. After a short time the following symptoms were present:—the complexion dirty and muddy; a feeling of great weakness; intense thirst; constant retching; cold clammy perspirations; extremely rapid pulse; the mind clear and perfect, though wandering at times, with much excitability from trifling circumstances; yet the day preceding her death she went some distance in a cab; also great pain at the chest, shortness of breath, and inability to lie down.

The examination of the body after death showed the uterus occupied the cavity of the pelvis; was of considerable size, soft and flabby to the feel; a portion of placenta, saturated with purulent fluid, attached to the inner surface; the veins and sinuses pervious to the passage of fluids; the sinuses containing pus-like corpuscles and granular corpuscles in a soft matrix, or in a thin saneous-looking fluid; serous effusion into the peritoneal cavity; exudation of a similar composition to that in the sinuses, on the surface of the peritoneum; serous effusion into the pleural cavity, with similar exudation on the surface of the pleura and beneath it; no injection of either the peritoneum or pleura, and an absence of all signs usually indicating the previous existence of inflammation in any part of the body.

It appears to me it would be difficult to have a better

demonstration of the following points:—(1) The adhesion of a portion of the placenta, imbued with purulent fluids, on the inner surface of the uterus; (2) a pervious condition of the uterine veins and sinuses, resulting from a want of complete contraction of that organ; (3) the entrance of purulent or saneous fluids into the uterine sinuses and veins; and (4) as a sequence, purulent infection of the general system ending in the death of the individual. I think it may also be concluded that the symptoms observed during life, and the appearances found after death, indicated the existence of that condition of the system which is considered as a very fatal form of puerperal fever. If these points be admitted, it will, I think, also follow that this case shows that one of the most fatal forms of puerperal fever arises from purulent infection of the general system, produced by the pervious state of the uterine sinuses—and that this pervious condition of the sinuses and veins may arise from an absence of firm and complete contraction of the tissues of the uterus after parturition or abortion.

These views, however, could not fail to be questioned, and on a former occasion when two cases showing some of the same facts were recorded, Dr. Barnes, the then President, remarked: "He had seen repeatedly puerperal fever occur in women after perfect contraction (of the uterus), and, on the other hand, no puerperal fever, although the uterus remained relaxed" ('Obstet. Trans.,' vol. vii, p. 36). No doubt cases do occur where the uterus is relaxed, and yet no symptoms of puerperal fever follow; for comparatively slight causes may obstruct the entrance of deleterious fluids into the sinuses, or the flow of such fluids along these canals. Many cases are also recorded where the uterus was relaxed and flaccid, and the sinuses and veins patent; yet their canals were blocked up with coagulated blood,—the coagulation of the blood being considered, at one time, as unquestionable evidence of the previous existence of phlebitis. But the remark that puerperal fever repeatedly occurred in women after perfect contraction of the uterus required inquiry; and a reference to Dr. Barnes' lectures

on this subject showed that he extended the term puerperal fever to diseases which had no relation to the puerperal period, and in which the uterus might be either relaxed or perfectly contracted without affecting the diseases which existed.

In the first place, Dr. Barnes appears to adopt the views which have been chiefly urged in Germany, viz.:

1. "Pregnancy induces a degraded condition of the blood; throws an excessive burthen upon the excreting apparatus; impedes the freedom of the circulation; causes hypertrophy of the heart."

2. "Labour adds to the condition left by pregnancy; shock; extensive local injury; an enormous waste of nerve and muscle, the consequence of physical exertion; greater degradation of blood from the conversion of nerves and muscle, and also from the proceeds of the involution of the uterine tissues."

3. "Hence a greatly exalted stress upon the excretory organs, and a general deterioration of the solids and fluids, inducing feeble physiological action, and therefore tendency to fall into pathological action; that is, to generate what in the strictest sense may be called puerperal fever." (The 'Lancet,' 1865.)

This seems a long list of evils to attend the perfectly natural process of pregnancy and labour, in a healthy young woman, during her first pregnancy and parturition. For it is in such cases that the most fatal instances of puerperal fever too often occur, and prove fatal in a few days—or even a few hours. The general health of some women, without doubt, becomes much deteriorated by repeated child-bearing, and may thus become predisposing causes for various diseases. But this does not occur in all who succumb from puerperal fever—notably not in the young and healthy female—and certainly had nothing to do with the illness and death in the present case. For, so far as observation could detect, the young lady was in perfect health up to the time of the induced abortion.

The strongest objections, however, to the views of Dr. Barnes appear to arise in those diseases which he considers

"in the strictest sense may be called puerperal fever." Five cases of disease are related; four of which have no relation to the puerperal period, and cannot, in any sense, be termed puerperal fever. The first is an instance of Bright's disease of the kidneys,—the second, of mechanical obstruction to the gall-duct,—the third, of acute atrophy of the liver,—the fourth, of scarlatina,—and the fifth, of phlegmasia dolens. A woman suffering from Bright's disease may become pregnant, may be confined, and subsequently die of the usual sequences of this disease of the kidneys. The pregnancy and labour may, and probably does, modify the course of the disease,—but it will not change it. The disease still remains disease of the kidneys, and the death is the consequence of the alterations in these organs. A pregnant or parturient woman may be attacked with mechanical obstruction to the gall-duct or with acute atrophy of the liver,—but the changes induced in the uterus, or the system generally, do not initiate or influence the minute alterations going on in the liver in the one case, nor send the obstructing cause into the gall-duct in the other. Scarlatina may attack a woman during pregnancy, or during the puerperium, but it does not change its nature in any way. It remains scarlatina, and may be communicated to the attendant, or conveyed to other individuals, identically as scarlatina. Yet, on the other hand, when a pregnant woman is attacked with scarlatina, or any of the acute specific diseases, abortion is almost always induced. To term these diseases, when they occur during pregnancy, or after parturition, uræmic excretory puerperal fever, cholemic excretory puerperal fever, scarlatinal puerperal fever, traumatic puerperal fever, &c., appears an unusual stretch of the imagination, and simply to apply new names to well-known diseases which have no direct relation to each other, and which as often occur in the male as in the female. Quite recently we have all been interested in a case which forcibly illustrates these remarks. A young lady of high rank was attacked with acute rheumatism at the time of her confinement. Yet this was considered and treated as acute rheumatism,—and no one,

so far as I am aware, has ever termed it rheumatic puerperal fever, or treated it as anything different from what it was—acute rheumatism.

The views expressed by Dr. Barnes as to the causes of puerperal fever seem equally open to great question. He considers it "is generated, manufactured, propagated inside the (lying-in) hospitals." If so, why does it occur so often as sporadic cases in all parts of the country, and even in the most healthy situations? It is estimated that about 3,000 women lose their lives every year in England and Wales from diseases incident to childbirth. Surely, these are not all "manufactured inside the lying-in hospitals?"

Further, that "exposure, mediate or immediate, to *any* contiguous disease, as typhoid, typhus, scarlatina, smallpox, erysipelas," (The 'Lancet,' 1866) are sources of puerperal fever. This appears the same as stated by Dr. Tyler Smith:—"It (puerperal fever) would not so often happen if all accoucheurs recognised the facts that erysipelas, typhus, scarlatina, smallpox, hospital gangrene, putrid sore throat, diphtheria, the *post-mortem* and other poisons were excessively prone, if brought near the lying-in woman, to originate puerperal fever. He did not question but that any of the agents which produced zymotic maladies might cause puerperal fever." ('Obstet. Trans.,' vol. iii, p. 408.)

There is some ambiguity in these statements. But if it be meant that these different kinds of contagion—these distinct poisons—are, when communicated to the parturient woman, transformed into one and the same disease,—then it becomes one of the most wonderful transformations we know of in nature. And, potent indeed must be the influence of the natural process of pregnancy or parturition that can so transform all these acute specific diseases into one and the same malady. Or, if it be meant that each of these specific diseases merely becomes modified by the parturient constitution—yet each still retaining its individuality—then there must be as many specific forms of puerperal fever as there are distinct poisons which generate and propagate each acute specific disease. I, however, know of no

facts which warrant either of these conclusions: which appear to be contrary to all well ascertained principles of disease. And I strongly incline to the opinion expressed by Dr. Prospero Sonsino, of Florence, who, in noticing the report of a previous discussion of this Society, remarks:—"I should be inclined to believe that the opinion of the President of the London Obstetrical Society arises from his having comprehended, under the name of puerperal fevers, all the diseases—febrile and perhaps non-febrile—which have attacked the women in childbed under his care, and hence he may be said to have found a greater number of sufferers amongst the parturient women of the easy class than amongst those of the maternity charity. ('L'Imparziale,' 13th May, 1865.)

However much I may feel obliged to differ from these views, as to the causation and nature of puerperal fever, they yet offer an explanation of much of the reputed contagious character, and the alleged occurrence of epidemics, of this disease. Dr. Barnes says:—"There is great reason to believe that many of the epidemic puerperal fevers breaking out in lying-in hospitals are really of scarlatinal origin,"—or in other words are epidemics of scarlet fever. "Dr. Collins mentions an instance in which a patient was admitted into the Dublin Lying-in Hospital labouring under a bad form of typhus fever. Two females who occupied the adjoining beds were attacked with puerperal fever and died. In another instance in the same hospital a similar accident happened. A patient labouring under typhus fever was admitted into a small ward of the house which contained only four beds; all the three other women were attacked with puerperal fever, and two of the three died" ('Practical Treatise'). The symptoms of these diseases are not mentioned, but it is a fair inference that these were instances of typhus fever being communicated to the parturient women. Any of the acute specific diseases can be thus communicated directly to the lying-in women, or, they may be carried to them from a distance through the medium of midwives or nurses.

Again, a practitioner may attend different women living in the same locality during the prevalence of an epidemic, and they may each suffer from the epidemic influence of the locality wherein they reside. But we know that puerperal fever is *not* contagious—is *not* communicated from one patient to another—is *not* conveyed by an attendant. As Dr. Murphy states :—"Puerperal fever selects its victims. In the same hospital, and in the same ward, it *will not* extend from bed to bed, but is found scattered in different directions" ('Lectures on Midwifery,' 1862, p. 681).

The chief importance, however, of these inquiries has reference to the means to be adopted for the prevention of the disease, and to the treatment when it unfortunately occurs. Should the alleged epidemics of puerperal fever prove, on further inquiry, to be epidemics of one or other of the acute specific diseases, then the treatment will be in accordance with the nature of the disease. Scarlatina will be treated as scarlatina—typhus fever as typhus fever, &c. Some modification being required in accordance with the puerperal state, the previous condition of the general health, &c. ; but the essential principles of the treatment, as well as the hygienic means to arrest its propagation, will be governed by the specific disease present at the time. It is almost unnecessary to refer to the diseases of the liver, kidneys, or of other organs which may be accidentally present during pregnancy, as these will rarely be confounded with the diseases of the puerperium. But in cases similar to the one now recorded the means of prevention and the treatment appear essentially distinct. As there is every reason to believe the infection of the general system arises from the patent state of the uterine sinuses, due to the want of firm construction of the uterine tissue,—it is of much importance, not only that the uterus should be firmly contracted at the time the labour is completed,—but that it should remain so, and not subsequently become relaxed. For it should not be forgotten that the contractile tissue of the uterus is peculiar to itself,—that it has a great tendency to become relaxed even some time after the labour is com-

pleted,—and that it is necessary to maintain the contraction once induced, and even to increase it if that were possible. To this end no means appear more worthy of confidence than the direct application of cold to the uterus, after the expulsion of the secundines, or the administration of two or three doses of the ergot of rye at intervals of an hour. Yet in cases of abortion there is not unfrequently a great difficulty, sometimes an apparent impossibility, to induce the partially developed contractile fibre-cells to respond to any of the usual stimuli, and to maintain a complete contraction of the organ. When injurious impregnation of the general system has taken place, I have seen much good result from the administration of the sulphite of lime, or of magnesia, in doses of twenty or thirty grains repeated every one or two hours; and washing out the cavity of the uterus with a weak solution of the sulphite of soda, or any of the sulphites. In some cases it has appeared beneficial to give the sulphite combined with small doses of brandy. But the treatment advocated by Dr. Graily Hewitt has been anything but beneficial in the few cases I have seen it employed:—"He was in the habit of applying the bandage very tightly over the uterus the moment the first symptoms appeared, and of administering internally a stimulating diet, including large doses of alcohol" ('Obstet. Trans.,' vol. vii, p. 35). The large doses of alcohol have failed to counteract or to remove the great constitutional disturbance, whilst they have injuriously affected the state of the nervous system. And the application of a bandage very tightly over the uterus has been simply impossible, in consequence of the tenderness of the abdominal walls, the great distension of the intestines with flatus, and the pain induced by any attempted pressure upon the organs in the pelvis.

In the examination of this case the communications between the uterus and the portion of the placenta which still remained, were examined with much care. The communications were open and direct into the great cavity of the placenta, through the continuous canal of the uterine sinuses. In this case there was no membrane interposed

between the uterus and the placenta,—and I failed to detect any trace of what has been termed the "utero-placental decidua" by Dr. Madge.

The structure of the inner part of the uterine walls, to which I only wish to advert at present, seems to differ from the usual descriptions. It would appear that the inner surface consists entirely of soft tissue which becomes mixed more and more with the contractile fibre-cells as we pass into the substance of the walls,—that the nuclei and small corpuscles in the soft tissue become developed into fibre-cells in the gravid state,—that the placenta is formed by the growth of the inner soft tissue,—that the super abundant soft tissue of the gravid organ is thrown off as decidua, whilst the contractile fibre-cells undergo the well-known fatty degeneration and reduction in size,—and that much soft tissue always remains at the inner surface mixed with the inner layers of the fibre-cells. Thus, the internal surface of the gravid uterus at the period of parturition does not become denuded of its lining membrane, but consists of the same elements as previously—*i. e.* soft tissue mixed with the fibre-cells. Some of the fibre-cells may be thrown off with the soft tissue (decidua), whilst other bundles or striæ may appear on the inner surface as denuded. But as these undergo the usual shrinking they disappear in the soft tissue which surrounds them, and the internal surface of the organ assumes the appearance which it presents in the non-gravid state.

After some remarks from Dr. Tyler Smith, the following letter from Dr. Barnes, who was unavoidably absent, was read:—"I am confident that contraction of the uterus, although a very desirable object to attain, is not a security against puerperal fever. I wish also to observe that Dr. Beck bases his criticisms upon five cases referred to in my lectures, as if these cases embodied my complete views upon puerperal fever. The lectures were broken off for want of time. I had of course a great deal to say about septicæmic or pyæmic puerperal fever arising in the patient's own system. I maintain that the division I propose in those lectures on puerperal fever into excretory, uræmic, cholæmic, scarlatinal, septicæmic, &c., is of great clinical value. For

example, a lying-in woman is taken with fever. It is very difficult, sometimes impossible, at first, to tell whether that fever is really of epidemic origin, as scarlatinal, or whether it be strictly of puerperal origin. The puerperal state will impress its stamp upon any kind of fever, no matter whence obtained. Therefore it is a sound clinical proceeding to regard every fever in a lying-in woman as puerperal fever first; then to endeavour to analyse the symptoms with a view to discover the peculiar or special nature of that fever. To say that true puerperal fever is not contagious is to refuse to believe in one of the best-attested facts in medicine."

Dr. Playfair said that he was in the position to relate a fact connected with puerperal fever which seemed to him to be of itself sufficient to negative Dr. Beck's theory that zymotic diseases were not modified by the puerperal state. Some years ago a lying-in ward had been established at King's College Hospital. The utmost care had been taken in the construction and management of the ward, but in spite of every precaution the mortality had been for the last year or two excessively high. About a month ago numerous cases of erysipelas appeared in the surgical wards, and immediately afterwards the two most recently confined women were attacked with a very adynamic form of puerperal fever, which proved fatal in both instances. There could be no doubt that the cause of the disease was the same as that which was producing erysipelas in the surgical wards. There was, however, no trace of erysipelas as such in the puerperal cases, and the natural inference was that the action of the poison was modified by the state of the patients. He was happy to state that the authorities of the hospital had now determined to close the ward altogether. Doubtless a relaxed condition of the uterus was, as Dr. Beck maintained, a strong predisposing cause of puerperal fever; but he believed it would be a most false and dangerous conclusion if we were to generalise from this fact, and overlook the other and well-established modes by which puerperal fever was produced.

Dr. Graily Hewitt stated, that the views he had on a former occasion enunciated on the value of pressure by means of the binder in the early stage of puerperal fever, and as to the extreme value of large doses of alcoholic stimulants at the same period, he still maintained. In a large number of cases, an account of which he hoped shortly to bring before the Society, he had tested their value.

Dr. Wynn Williams considered the disease in question to be identical with that met with during the progress of other diseases, but objected to the name pyæmia, believing it to be an accidental occurrence during the progress of a certain disease, and not always present. He alluded to septicæmia, which was caused by the absorption into the system of the putrid emanations from

decomposing animal matter. Pure pus itself, when introduced into the circulation, was no more injurious than any other foreign material, as quicksilver. When scarlatina, erysipelas, and other allied diseases are present, the air is always contaminated with putrid emanations, and this, being brought in contact by vibrios generated in such an atmosphere, or other ways, readily sets up putrefaction in the discharges of the parturient woman, and these, being retained, are very apt to infect the patient. If, therefore, in the discharges there is the least offensive smell, it is right at once to have recourse to some disinfectant injection, of which a solution of iodine is the best.

Dr. Braxton Hicks was inclined to join issue with Dr. Beck upon the statement that this preparation tended to prove the existence of open mouths into the placental cavity. He held it almost certain that such openings did not normally exist. In fact, Hunter had overlooked the existence of the delicate membrane which represented the wall of the vessel as it passed through the innermost layer of uterine tissue to ramify on the mucous surface opposed to the placenta. The injection Hunter employed burst through this membrane, and thus it appeared to lead into the placental cavity. This membrane would readily be destroyed under the conditions in which the uterus was placed in the case related. But he thought we should make a dangerous and retrograde step if we ceased to acknowledge the zymotic diseases as a cause of so-called puerperal fever. He considered that that disease may be divided into two great classes, with a few minor kinds—namely, that produced by decomposition of a clot, or the secretions in the uterus, thence called endogenetic; and that derived from zymotic poisons, of which scarlatina and erysipelas were the most common. He had in his own practice found that about three-fourths of the puerperal fever he saw was somehow mixed up with scarlatina. But in the lesser class, owing to the decomposition of clots, he thought very great benefit was to be derived from washing out the uterus in all cases where the discharges were offensive. Of disinfecting fluids he preferred the solution of permanganate of potass, because it showed when it had done its work. It was a curious fact that offensive lochia had been present in all cases but one of acute puerperal mania which he had seen.

Dr. Brunton said that, with regard to the theory of the production of puerperal fever by zymotic poison, his experience was decidedly negative. He had attended several confinements in which, not only was there scarlet fever in the house, but the children were actually lying ill in the room, and no bad symptom had occurred to the mother during her convalescence. He agreed with Dr. Beck to a considerable extent, especially as to the advantage of securing a firm contraction of the uterus after delivery.

Dr. SANSOM could not agree with Dr. Tyler Smith, that drugs were hopeless when once pyæmia had set in, and that "antiseptics were the feeblest of all feeble measures." He was glad to hear that the author of the paper had found the treatment by the sulphites successful. He believed Dr. Polli's introduction of the sulphites into therapeutics to be one of the most valuable additions to medical science. He did not agree, however, with Dr. Polli in his idea that the sulphites do not act upon the organised germ of disease, but upon the pabulum in which these germs are propagated. He believed that they acted directly as septicides. Dr. Sansom stated that he had succeeded in producing a series of salts which combined the diffusibility of the sulphites with the potential efficacy of carbolic acid. These agents, the sulpho-carbolates, he would take an early opportunity of introducing to the notice of the profession.

The PRESIDENT agreed with the author in his view of the pathology of the case which he had brought before the Society. It was one of puerperal septicæmia, due to the absorption into the blood of putrid matter from the uterus. But while admitting that perfect contraction of the uterus was most important, he could not consider the want of it as more than an occasional element in producing puerperal fever, which had many other sources. He was of opinion that cases of sporadic peritonitis should not be tabulated with cases of puerperal fever, as the former arose from ordinary causes of inflammation, while puerperal fever, whether accompanied or not by peritonitis, arose from the introduction of poison into the blood, either by the veins or the uterus, or by the lungs in inspiration. Contrary to the author, he was a strict believer in the contagion of puerperal fever immediately from patient to patient, and mediately through a third person. He was also convinced that other fevers, as typhus, scarlet fever, measles, and the emanations from hospital gangrene, had been prolific causes of puerperal fever. The taint conveyed from post-mortem examinations was another source of puerperal fever. This was well illustrated by the statistics of the Vienna Lying-in Hospital where, at one time, when the students passed directly from their dissections to the lying-in women, the mortality was 1 in every 10 deliveries. When this arrangement was changed, the per-centage of deaths fell to 1 in 74. Lying-in hospitals are no doubt a boon to poor women without homes, yet we must remember the fact that the mortality in them from all causes is rarely less than 1 in 90 or 100, and generally greater. The institution of cottage hospitals would no doubt greatly lessen that mortality, and he hoped some day to see them established. Out-door institutions, giving home attendance, such as the Royal Maternity Charity, presented a much smaller mortality. In that Charity only 1 death in 350 deliveries occurred. In conclusion, he could add, from long experience, his

testimony to the great value of disinfecting injections of a proper temperature, timely resorted to, in preventing and arresting at its outset septicæmia of uterine origin in cases of putrescent lochia. But they came too late when delirium and other formidable symptoms had supervened.

Dr. Snow Beck, in reply, observed that lying-in women were no doubt liable to the various zymotic diseases; but when they did occur they presented the same essential characteristics as at other times. Nothing could be more erroneous than to term every fever and every disease which occurred after parturition "puerperal fever." Typhus fever, scarlet fever, &c., had no doubt again and again been introduced into lying-in hospitals, and decimated the inmates; but the destroying agent was still typhus fever, scarlet fever, &c. Suppose the transformation theory was adopted, it would lead to this; that pregnancy had the marvellous power of transforming every disease it might be associated with, not into so many other diseases, but all into one and the same disease—puerperal fever. Such conclusions could only be admitted after the strongest proofs, and not on the mere assertion of anyone. Puerperal fever had been correctly compared to surgical fever, seeing that they both arose from the same cause—purulent infection of the general system. In primiparæ the uterus often contracted very languidly; and when it did contract well, and expel both the fœtus and the placenta, it was far from uncommon for it to become gradually relaxed; and it was this relaxation which caused the sinuses to become so patent as to admit of purulent infection through them, and which required therefore to be so much guarded against. There could be little doubt that many diseases which had nothing to do with the pregnant state were included under the term "puerperal fever;" also that purulent infection of the general system through the previous sinuses gave rise to one of the most dangerous affections following parturition. But whether these propositions included all the phenomena observed in puerperal fever, or not, could only be determined by the careful clinical observation of facts, and equally careful examinations after death.

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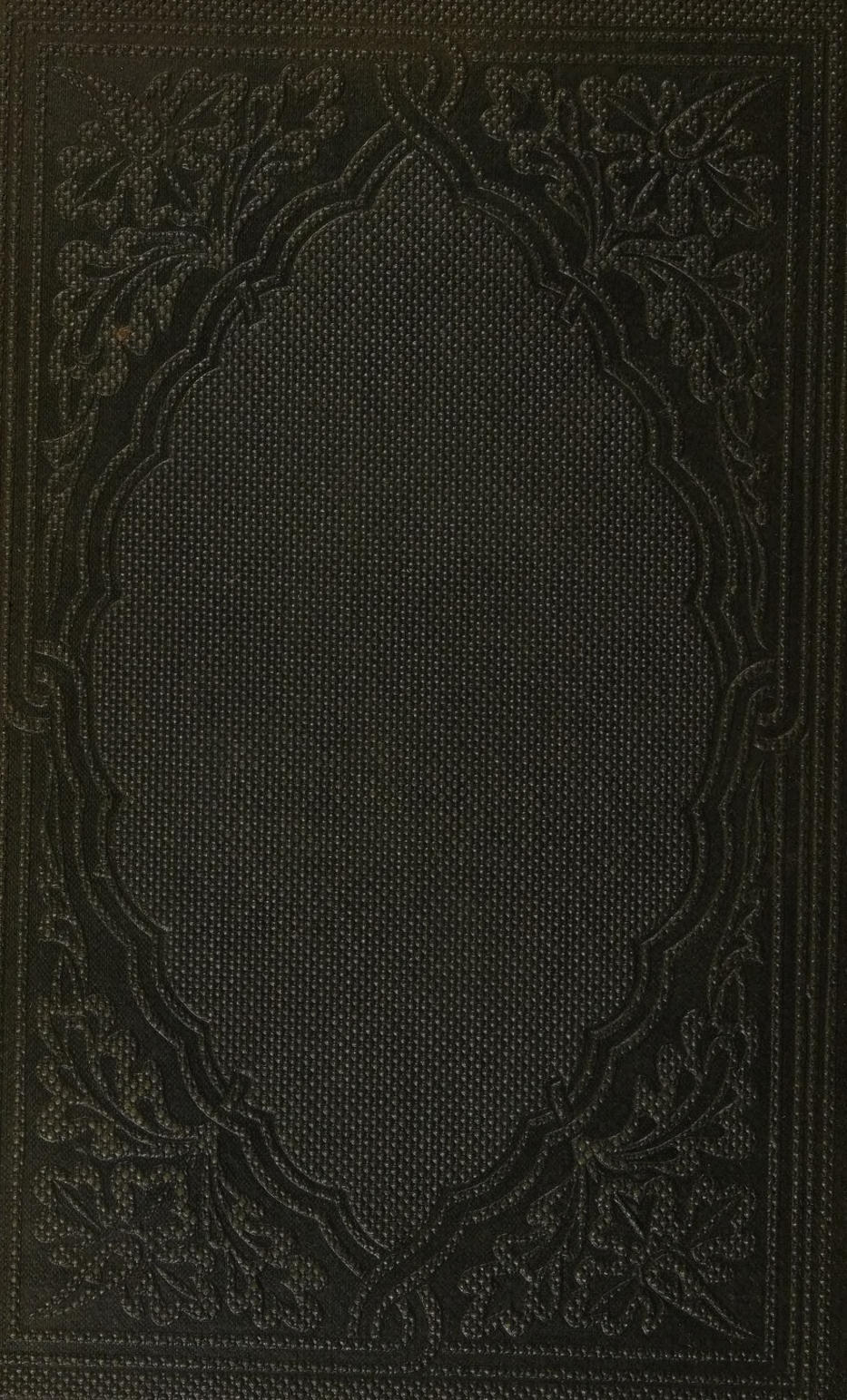
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